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JOURNAL
OF THE
Tennessee State Medical Association
OLIN WEST, M. D.
SECRETARY-EDITOR
306 FIRST NATIONAL BANK BUILDING
NASHVILLE, TENN.

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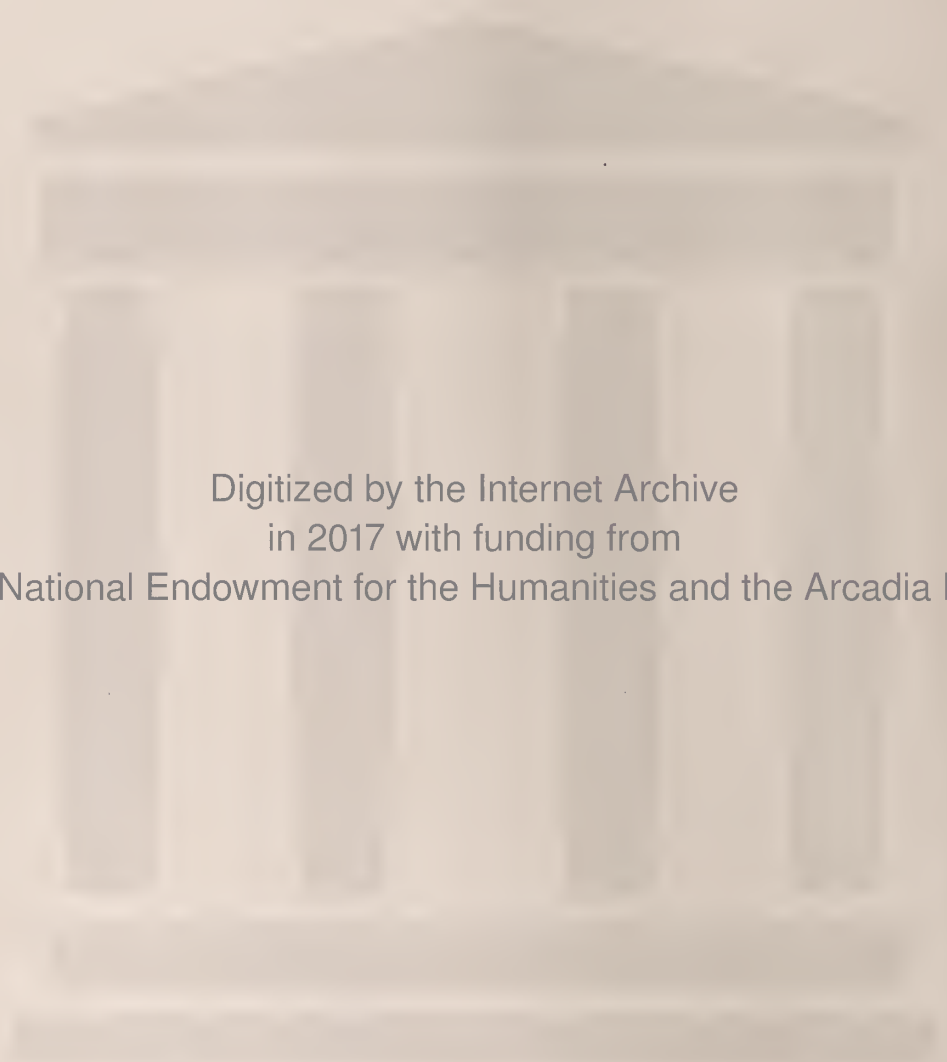
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THE JOURNAL

OF THE

Tennessee State Medical Association

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VOLUME VIII
NUMBER 1

NASHVILLE, TENN., MAY, 1915

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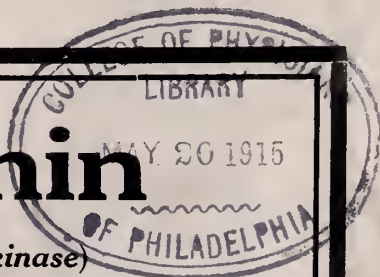
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THE JOURNAL **OF THE** **TENNESSEE STATE MEDICAL ASSOCIATION**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE

ISSUED MONTHLY, under Direction of the Trustees

OLIN WEST, M. D., Editor and Secretary

J. F. GALLAGHER, M. D., Associate Editor

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VOLUME VIII

NASHVILLE, TENN., MAY, 1915

NUMBER 1

PRESIDENTIAL ADDRESS.*

By S. M. Miller, M.D.,
Knoxville.

Mr. Chairman, Fellows of the Tennessee Medical Association, Ladies and Gentlemen:

My first and most pleasing duty is to express to you my profound appreciation of this distinction with which I am honored. This I will be only able to do in a halting and imperfect way, as, in my estimation, there is no offering within the gift of the people of Tennessee, or any class of its citizens, that measures, even remotely, with that of directing the councils of its medical organization.

In the preparation of a presidential address it is the custom to "take stock" and see how the books balance for the year. It is most gratifying in such an undertaking to review the progress that has been made and enjoy the good cheer of witnessing the wide strides that have been attained; but good bookkeeping requires a reckoning, not only on the points of merit on this side of the balance-sheet, but just as diligent an inquiry for items of demerit and hindrance that may be found on the other. With this latter thought in mind, I offer you the subject:

Psychology of Error.

There are three classes of thinkers in the world, and a fourth and larger unclassified group that vegetate serenely through life, ab-

sorbing and disengaging ideas much as the elements of nutrition are appropriated and eliminated. The first is made up of philosophers who seek knowledge for its own sake; who regard all the operations of nature as being subservient to general law, who attempt to trace every effect to an antecedent cause, and who would unravel the intricacies of every proposition without reference to any preconceived notion of utility or beneficence. The next class is constituted of those of an ethical or moral sense, who see in the ultimate principles of being the development of truth, right and virtue. The third group is made up of all those who believe in the existence of superhuman powers, of more or less anthropomorphic constitution, ruling and pervading the universe, and with whom or which it is possible to hold some character of communion. The remaining unclassified contingent, mentioned as intellectual herbivores, probably belong in that division of the animal kingdom set apart by the older writers, on moral philosophy, as being ruled and governed by instinct.

Members of the first class for all time have been pathfinders of intellectual progress, moulders of the spirit of the times—they form and attune aright the habit of thought, alter the measure of probability, and dissipate the cumulus vapors of superstition and error. They are few in number and often hold a position so far in advance of popular understanding as to be obliged to wait long periods of time for recognition.

Those of the second and third make up the mass of thinking mankind, and the boundaries of their mental limitations are not clear-

*Read at meeting of Tennessee State Medical Association at Nashville, April 13, 14, 15, 1915.

cut and distinct. Of these, Dr. Osler had occasion to observe: "Primitive views still prevail everywhere of man's relation to the world and to the uncharted region about him. So recent is the control of the forces of nature that even in the most civilized countries man has not adjusted himself to the new conditions, but stands, only half awake, rubbing his eyes, outside of Eden. Still in the thau-maturgie state of mental development, 99 per cent of our fellow creatures, when in trouble, sorrow or sickness, trust in charms, incantations, and to the saints." At first thought a statement like this seems exceedingly broad, yet the fact is evident that supernatural interpretations of phenomena not understood is the common practice of a large majority of mankind.

In the infancy of the race all things were understood from their incidental appearance, and fanciful hypotheses made to account for their varied operations. Inspired medicine-men, thought to be in communion with supernatural agencies, benevolent or malevolent, and acting under their mystic directions, shaped the trend of popular thought and gave to cosmic nature its physical and esoteric elucidation. The earth was what it appeared, an extended plane touching the skies at the horizon; the stars, minute openings for the admission of light; the sun, a glowing torch traversing each day the little journey from side to side of the circumscribed earthly boundary. Every unusual operation of natural forces portended some occult special interference determined by the moral conduct of the trusting people. This archaic constitution of primitive thought has, of course, been modified since which time. Right thinking pioneers have probed the secrets of nature and by fearless appeal to the majesty of reason determined the all-pervading domination of physical law. It is now said that no effect can be considered without reference to its cause—that whenever a miracle is evoked it is only for the want of understanding. Comets no longer foretell the death of kings; epidemics are arrested by sanitation instead of the ringing of consecrated bells; tempests, floods and droughts are predicted from mathematical calculations of meteorological data, instead of being attributed to

an indiscriminating interposition of super-physical agencies.

But, notwithstanding the splendid achievements of the recent past, in scientific discovery, in the mechanical application of the forces of nature to useful purposes, and the close analysis of mental operations by which errors of interpretation are eliminated, legends of the inscrutable past persistently obtrude themselves to becloud and derange improved institutions. This is not a matter of surprise when it is remembered how the pliant mind of childhood is moulded to myths, and its growing development restrained by conspicuous landmarks at every turn of the way, forbidding any departure from the well trodden conventional thoroughfares of the hoary past. The dual educational system followed up from the myth-lore of childhood to the extreme limit of intellectual attainment, offered by the school-craft, presents the strange contradiction of teaching a given order of principles in one department and a diametrically opposite in another. The heliocentric concept of revolving worlds moving in harmony through unlimited space, operating in cycles of time without measure or bounds, of changing forms and organizations filling to overflowing the possibilities of constructive energy, without one conceivable unit of matter being added or abstracted, of conservative forces maintaining an equilibrium that has never known an interruption or variation—these things are taught in the schools and colleges and universities, and have become the accepted intellectual properties of every one emancipated from the restrictions of primitive scholasticism. Within the same walls and under sanction of the same maintenance is given the poetic visions of Milton, in "Paradise Lost," with all the refinements of legendary embellishment. On one day in the week we concur in the pronunciamiento, "Thou shalt not suffer a witch to live," and on the other six would laugh at a judiciary seriously considering such a crime.

From this want of uniformity in educational training, and from the strong disposition of the human mind to appeal to the occult in all things not clearly understood, arises one of the main factors of hindrance to medical progress.

Analyze any one of the various sectarian schemes for healing the sick and it will be found to meet its measure in the mysticism of its constitution. The greater its departure from ordinary reason, the more direct its contradiction of all human experience, the more ridiculously absurd its pretensions to logic and good sense, the readier its acceptance by the credulous masses. Take for illustration the question of absent treatment; the divine healer's mystic magic; the "scientific" idea that pathology is a mistake of "mortal mind;" the extraordinary mathematical proposition that the division of a substance multiplies its potency, or the grotesque notion that the spinal column is so loosely constructed as to go out of alignment on the slightest provocation. Not only of these, but all along down the line of secret, psychic and pseudo religious healing systems, the one attractive feature is the element of mystery it embodies. Let it be propounded that a Dowie is a reincarnated spirit of Elijah the prophet; that Madam Blavatsky, a mediumistic adept in oriental occultism, has attained physical and psychical connection with the Mahatmas, or that some digger Indian or unwashed Hottentot has framed a wonderful formula by crystal gazing into his treasure store of tribal totemlore, and the multitude will be prostrated with profound conviction, convicted and convinced to the extent of gratuitously manufacturing any amount of collateral testimony in support of the marvel. "It is impossible to assign limits to human credulity, or the influence of the imagination over bodily ills." Out of this peculiar mental bias grows the remarkable experiences of shrine cures, relic healing and legendary faith charms. A red corn cob, attached to some part of the body with a string and immersed in a vessel of dirty water, instantly becomes endowed with the most colossal virtues, simply and solely because it can not possibly be understood how such a thing could come about. A wilted potato, carried in the pocket, instead of a buckeye, is altogether as efficacious as a preventive of piles, if only the hemorrhoids can be kept in ignorance of the fraudulent exchange. If it were a legal requirement to place on the outside of every package of proprietary or patent medicine its exact contents, or if in the prescribing of drugs, bad chirography and unintelligible Latin were replaced by every-day

vernacular, in readable characters, "O what a fall there'd be, my countrymen!"

The inherited and tutored ideas that the world is peopled by incorporeal genii, or intermediate potencies of ethereal essence, directing by unseen touch every incident of cosmic activity, now as in the past, offers the Hindoo faker, the Indian medicine-man and the ubiquitous faith-healer his golden opportunity for commercialism. Almost every discovery in physical science, while new, is endowed with fantastic qualities and hawked as a specific for incurable diseases. Parenthetically, it is difficult to restrain the impulse to specify some instances in support of this statement. Almost every faith cult, with a healing side line, is ready to outrival Dr. Hornbok, who,

"Even them he canna get attended,
Altho' their face he ne'er had kend it,
Just——in a kail-blade and send it,
As soon's he smells it,
Baith their disease and what will mend it,
At once he tells it."

No appeal can be made to human judgment, common sense and ordinary experience to stay such practice, for, in the very nature of the case, it is founded upon unreason. Better impeach the character of the family of such an one as to criticise adversely his pet superstition. An attempted exposure of the most blatant humbug will rally to his support his faithful followers. The fascination of the wonder-worker is so "congenial to the multitude that if they are forcibly awakened, they regret the loss of their pleasant vision" and hasten with eagerness to embrace the next attraction.

A local and present-day illustration of the mental attitude of the public toward a glaring fraud, when tintured with sufficient unreason, is in the limelight of public judgment in one of our East Tennessee counties. A party of undetermined race, color and nationality, without legal, educational or moral qualifications, charged with being a fugitive from justice from a neighboring state, suffering in person from a form of hydrophobia (the fear of water and soap) is operating to the extent of a Lourdes wonder or a St. Ann faith cure shrine. The magnetism of his methods consists in the taking of the case histories, without assistance from the patient, in hieroglyphic characters, from left to right and from right to left of the written page;

afterwards to be read and illuminated to the trusting one in an unknown tongue. The therapeutic necessities are supplied from one of three stock preparations, the mystic number "three" giving the medicine an elective potentiality, fitting one of the number to the special pathology in hand. Of peculiar interest is the observation that good citizens, representatives of the higher order of intelligence in the community, leaders of thought and opinion, together with the masses, are standing in line to receive these wonderful ministrations, and ready to make it unsafe for any one with enough temerity to satirize so glaring an exhibition of human folly.

It has been well said that "New ideas, new faculties and improved understandings have to be acquired by positive and strenuous efforts, while, on the other hand, delusions and superstitions are to be abandoned by an attitude of conscious neglect. The cherished illusions of an education that rests upon the forces of traditional authority, ritualistic observances and statutory regulations are not to be modified by open combat, but by the slow evolutionary changes in the intellectual condition of the people, growing out of the demonstrated revelations of established truth—a perfect emancipation from the retrospective habits of thought, that have been so long almost universal; the estimation of all questions by secular standards, by the light of common sense, by the measure of probability furnished by daily experience," can only be attained by that character of mental discipline which rejects the incongruous as a legitimate problem for intellectual analysis.

TENNESSEE STATE MEDICAL ASSOCIATION.

Official Minutes of the Eighty-Second Annual Meeting, Held at Nashville, April 13, 14 and 15, 1915.

Tuesday, April 13—First Day—Morning Session.

The Association met in the hall of the Y. M. C. A. building, and was called to order at 10:15 a. m. by Dr. Perry Bromberg, Chairman of the Committee on Arrangements.

Rev. Carey A. Morgan, Nashville, delivered the following invocation:

Prayer by Mr. Morgan:

Our Father, at the beginning, we look to Thee and invoke Thy blessing to rest upon this assembly and upon the conference of these men with each other. We pray that Thou wouldst let Thy benediction rest upon these physicians and surgeons. We are thinking of them eagerly in their battle with pain and disease and death. We claim for them the blessing that goes to those who minister great things for men and women. We remember the comfort they bring to the sick room, and how they reassure their patients by their presence. The one who makes this prayer owes to them a great debt for himself and for his loved ones. Our Father, wilt Thou keep them safe while they meet here in the capital city of the state? Wilt Thou bless their loved ones at home? Do Thou bring them into the sacred circle under the roof of the tree where the loved ones shelter. Bring them together in safety, with renewed strength, for their holy task. We thank Thee, Lord, for their leadership. We bless Thy name when we remember they are trying to prevent disease. Let Thy blessing rest upon preventive medicine, preventive methods, upon sanitary laws and regulations, upon all health boards and health officers. Help the people to co-operate with them in this matter, and we pray, dear Lord, that these men who lead in such a holy ministry may be men of faith. Surely they have much to make them think of Thee as they come to know the body that Thou has fashioned, the wonderful processes of digestion and assimilation by which food becomes bone and blood and brawn and brain. As they study the eye and the ear, these wonderful contrivances by which sound and light are let into the brain, and the brain is conscious of all things outside itself; as they know that miracle of growth by which the child becomes a man, lengthening the bones, toughening the muscles, tuning the nerves, multiplying the brain cells, surely these men ought to be men of faith.

May this be the best conference that these men have ever had. The whole city welcomes them. May they have precious, wonderful

fellowship with each other, and all these things we ask in the name of the Great Physician who watches over them in their holy ministry. Amen.

**Address of Welcome by Dr. C. N. Cowden,
Nashville.**

Dr. Cowden said: Mr. Chairman, Members of the Tennessee State Medical Association, Honored Guests, Ladies and Gentlemen: It is my glad privilege and unbounded pleasure to stand sponsor for the Nashville Academy of Medicine and the Davidson County Medical Society and bid you and yours a hearty and cordial welcome to the capital city of your state. We are indeed proud and glad to have this distinguished body of men partake of our hospitality.

After you have finished the scientific program; after you have feasted and fattened upon the good things which will be placed before you; after you have come and gone, we hope and trust you will carry away with you memories that will linger with you like a sweet melody, a pleasant dream or a beautiful sunset. (Applause.)

We welcome you as a profession for what you have been in the past. Hoary with age, contemporary with the growth of civilization itself, indissolubly linked with every step of human progress, and of deepest interest to humanity, your profession has dealt with human life and physical pain.

When one of our members wrote the Hippocratic oath he promulgated a code of ethics that has come down to us, unchanged and unchallenged, applying alike to all ages, countries, climes and tongues, and it will stand for centuries and even down to the end of time. In it is found the one vital spark that animates and vitalizes the body politic today, and it has made us the wonder and admiration of the world. The men who have fashioned and patterned their lives in this science have stood at the forefront of every civilization and they are found there today.

We not only welcome you for what you have been in the past, but for what you are at present. We are living amid the blazing glory of medicine of the twentieth century. But this is only a foretaste, because you belong to a body of men who, undaunted, un-

afraid daily challenge the impossible, and make the impossible of today be the primary principles of our science tomorrow. With test tube and microscope you have delved into the laws of nature and the etiology of diseases and have robbed them of their secrets and made them yield up some of their hidden mysteries. Victory after victory has been yours, and the world stands by simply appalled at the wonderful handiwork of your craft. There is not a place today where civilization has builded her temples and erected altars, where you are not to be found battling for the same high ideals and conceptions of duty, battling against disease and death, dispelling clouds of sadness and sorrow and scattering sunshine and gladness everywhere. Whether in hovel or hut, mansion or palace, your welcome is always supreme. We not only welcome you for what you have been in the past and for what you are today, but we welcome you for what you are to be in the future.

When we stop for a moment and contemplate the heights to which we aspire and towards which we bend every fiber of our being, it is enough to make one grow dizzy with enthusiasm and stir every human heart with honest pride. We do not know what is in the ingenious brain of the future to be woven in the loom of what is to be, but we believe, gentlemen, we are in the dawn of the day when Pasteur's dream will be realized in full, when he was led to exclaim that it is within the power of man to make all contagion disappear from the world. Think of it, gentlemen, no more contagion, no more infection, no more drawing together and keeping away from contact with your fellow men when you meet upon the street and highway; no more drawing together of your dear ones as the yellow flag of disease flutters before you, for pestilence will be stayed forever. No more agonies, no more prophylaxis, for the earth will have been fumigated, sterilized, cleansed and purified, and we shall stand once more near virgin purity as did Adam and Eve in the Garden of Eden.

The task is large, momentous, stupendous enough to stagger the intellect with its far-reaching possibility, but the unseen hand is leading us on, and somewhere, some time, we

will sit down under the trees whose leaves are for the healing of the nations. You are a body of men who are welcome anywhere this side of the Elysian fields of the millennial dawn, and that is the reason why we welcome you to this our city of opportunity that is believed by its multitude of inhabitants to be the center of education and culture and refinement. But we warn you of one thing: If you are talking to a stranger, do not ask where he lives, for he may have to tell you that he lives in the bad, wicked city of Memphis, Chattanooga, or Knoxville. But, gentlemen, no matter where you are from, whether from the eastern peaks or from the western plains, whether from the highland rim of the central basin, whether from hamlet or village, city or metropolitan center, we welcome you to our commonwealth, to our homes, to our hearthstones and to our inner shrine, as well as to our hearts. Walk right in, take a seat, help yourselves; spit on the floor or cuss a few notes, anything to make you feel at home. (Laughter.) We want you to do anything to make you feel at home, and the city and the fullness thereof is yours to command and possess. We bid you a hearty welcome. (Loud applause.)

In the absence of Dr. A. F. Richards, of Sparta, who was to have responded to the address of welcome. Dr. Bromberg called upon Dr. Frank A. Jones, of Memphis, to perform this pleasant duty.

Response to the Address of Welcome by Dr. Jones.

Dr. Jones said: Mr. Chairman, Members of the Tennessee State Medical Association, Ladies and Gentlemen: The role of a substitute is frequently an awkward one. You have possibly read of the Federalist after the Civil War. He did not see army service, but he hired a substitute. After the Civil War he applied for a pension, and on being questioned closely as to what service he saw, he replied that he did not see service. The question was asked, "Were you shot?" He replied, "No." He was asked why he was applying for a pension and he replied, "I was shot in the substitute." (Laughter.)

It is pleasant to be here on such an occa-

sion. The very atmospheric conditions and the environment are conducive to wholesome fellowship. We are here from the east, we are here from the west, and we are here from betwixt the east and the west. We are not here from the west merely as medical practitioners or from the east as wise men, nor from the central portion of the state as medical Pharisees, but we are here as men, as physicians on a common ground for a common cause, for the uplifting of medical ideas in this state and for the alleviation of suffering humanity.

We recognize the fact that we are in Nashville—Nashville, Tennessee, specifically—the hub of culture from which spokes lead in the distribution of its culture to the Southland.

Several years ago it was the speaker's privilege to respond to an address in the city of Boston. I am happy this morning to say that in making an attempt at a response here that I did not find myself as I did there. I was introduced as a rebel, as an uncompromising rebel, by Dr. Richard C. Cabot, of Harvard University. He said some nice things and some funny things with reference to the greatness of Boston. I responded to this effect: Ladies and gentlemen: I am glad to be here in Boston, the center of culture and cults. (Laughter.) I am glad to say that this city of Nashville, while it is a center of culture, has very few cults. We all appreciate what Nashville is, with the glories and traditions that hang around Nashville. We know what Nashville has contributed to the medical world. We know that prior to the Civil War the city of Nashville has a roster of men, she had a faculty of eminent men that had no superiors on this globe.

We are glad to respond to that sentiment. We are glad to give voice to that sentiment. In responding to the address of welcome on behalf of the Tennessee State Medical Association, there is a fact that stands out in bold relief with reference to what is being done in medicine. The State of Tennessee should pride itself on the fact that she has now two medical schools both of which are high class and are as good as those in any country. (Applause.)

It is a regrettable fact—and pardon me for

speaking plainly, because I have been accused many times of telling the truth—there has been bickering between Middle Tennessee and West Tennessee and East Tennessee, and you know it. There have been differences of opinion. There have been some delicate points raised between these sections, and you know it. There has been considerable comment made about the schools in Nashville, and the schools in Memphis, and the schools in Chattanooga, as well as the schools in Knoxville, and you know it is a fact. Up to several years ago there was a good deal of unnecessary mud-slinging. We are happy to say today we meet here in a more harmonious spirit. We are happy to say we are here today with a better understanding of one another. We are here today where we can meet as man to man and as physician to physician. We are here in a solid phalanx with all bickerings put aside, with all our differences put aside, and we are here today marching shoulder to shoulder, with no conflicts and with no discord. We are here as a harmonious medical profession, and we believe that the establishment and maintenance of the two schools in the state of Tennessee are the two best factors for the elevation of the medical profession in this state and will bring the medical profession of this state up to the highest point of efficiency. On behalf of the State Medical Association we accept your invitation gracefully and gratefully. I thank you. (Loud applause.)

Dr. Bromberg, Chairman of the Committee on Arrangements, made announcements as to the time of meeting of the House of Delegates, the general meetings, and the banquet, after which he introduced the President, S. M. Miller, of Knoxville, who took charge of the meeting.

The reading of papers was proceeded with.

Dr. H. F. Friedman, Nashville, read a paper entitled "Sporotrichosis," which was discussed by Drs. Haase, Litterer, King, and the discussion closed by the essayist.

Dr. A. F. Richards, Sparta, read a paper entitled, "What Is Medical Legislation For?" This paper was discussed by Drs. DeLoach, Ellett, West, Krauss, Dixon, Miller, Crook, Tigert, and discussion closed by the author of the paper.

Dr. M. C. McGannon, Nashville, read a paper entitled, "How Shall We Treat Appendicitis?"

This paper was discussed by Drs. Baird, Burch, Reagor, Howlett, Cowden, Sullivan, and in closing by the essayist.

First Day—Afternoon Session.

The Association reassembled at 2:15 p. m. and was called to order by Dr. H. T. Wood, Nashville, Vice President.

Dr. K. S. Howlett, Franklin, read a paper entitled, "Tubercular Meningitis with a Report of a Case," which was discussed by Drs. Padgett, Krauss, Litterer, and in closing by the essayist.

Dr. Eugene J. Johnson, Memphis, read a paper entitled, "Report of the Technic and Results in Eight Gasserian Ganglion Operations." The paper was discussed by Dr. Fort and in closing by the author of the paper.

Dr. E. Dunbar Newell, Chattanooga, read a paper entitled, "Surgical Diagnosis," which was discussed by Drs. Padgett, McNabb, Burns, and in closing by the author of the paper.

Dr. E. C. Ellett, Memphis, followed with a paper entitled, "The Hospital Situation in Tennessee," which was discussed by Drs. Bromberg, Haase, McCabe, McNabb, Krauss, and in closing by the author of the paper.

Dr. Duncan Eve, Jr., Nashville, read a paper entitled, "Bad Results in Colles and Potts Fractures, and How to Prevent Same."

Dr. Battle Malone, Memphis, read a paper on "The Indications for the Open Operation in the Treatment of Fractures."

These two papers were discussed together by Drs. Newell, Burns, Miller, and the discussion closed by Drs. Eve and Pollard.

Dr. T. G. Pollard, Nashville, read a paper entitled, "Ectopic Gestation." Discussed by Dr. Sanders and discussion closed by the essayist.

On motion the Association adjourned until 8 p. m.

First Day—Evening Session.

The Association reassembled at 8 p. m. and was called to order by Vice President Wood. The President, Dr. S. M. Miller, Knoxville,

delivered his address, selecting for his subject, "Psychology of Error."

Dr. J. W. Trask, Assistant Surgeon General U. S. Public Health Service, Washington, delivered an address on "The Relation of the Physician to the Public Health."

Dr. E. M. Holder, Memphis, followed with an address entitled, "The Debt of the Public to the Medical Profession."

Senior Surgeon Jos. H. White, U. S. P. H. Service, was present on the platform and was called upon by the President. Dr. White responded in a delightful way, but declined to make any extended remarks.

On motion the Association then adjourned until 9 a. m. Tuesday.

April 14, Second Day—Morning Session.

The Association met at 9 a. m. and was called to order by Vice President J. M. Clack, Rockwood.

Dr. J. S. B. Woolford, Chattanooga, read a paper on "Duodenal Ulcer." Discussed by Drs. Barnett, Jones, and in closing by the author of the paper.

The Secretary moved that the address of Dr. J. M. T. Finney, of Baltimore, be made a special order for 10 o'clock Thursday. Seconded and carried.

Dr. J. McC. Hogshead, Chattanooga, read a paper on "Nasal Sinus Diseases." Discussed by Drs. Goetz, Kennon, Ellett, McKinney, Crook, and in closing by the essayist.

Dr. A. W. Harris, Nashville, followed with a paper entitled, "Diagnosis of Syphilis of the Nervous System," which was discussed by Drs. Simon, Macquillan, Spitz, and discussion closed by the author of the paper.

Dr. Frank A. Jones, Memphis, read a paper entitled, "Further Consideration of Autumnal Pneumonia." Discussed by Drs. McNabb, Witt, Young, and in closing by the essayist.

Dr. W. H. Witt, Nashville, read a paper entitled, "The Heart in Acute Infectious Diseases." This paper was discussed by Drs. McNabb, Brandau, and in closing by the author of the paper.

Dr. William D. Haggard, Nashville, read a paper entitled, "Colossal Goiters," which was illustrated by numerous slides. The paper was discussed by Drs. Johnson, Holder, and in closing by the essayist.

On motion the Association adjourned until 2 p. m.

Second Day—Afternoon Session.

The Association reassembled at 2 p. m. and was called to order by Vice President Clack.

Dr. Frank Billings, Chicago, delivered a special address on "Acute and Chronic Rheumatism."

On motion of Dr. Haggard, a vote of thanks was extended to Dr. Billings for his forcible and masterly address.

Dr. Edward C. Rosenow, Chicago, delivered a special address on "The Etiology and Experimental Production of Appendicitis, Ulcer of the Stomach and Cholecystitis."

On motion of Dr. John A. Witherspoon, a rising vote of thanks was extended to Dr. Rosenow for his instructive address.

Dr. Willis C. Campbell, Memphis, read a paper, which was illustrated by slides, on "Orthopoeedic Cases." The paper was discussed by Drs. Nichol, Billington, and the discussion closed by the author of the paper.

Dr. O. H. Wilson, Nashville, read a paper entitled, "Some Phases of Infectious Diarrhoea," which was discussed by Drs. Hill, Litterer, and in closing by the essayist.

Dr. Richmond McKinney, Memphis, read a paper entitled, "Epidemic Otitis Media," which was discussed by Drs. Wood, Ellett, Price, Crawford, and in closing by the essayist.

On motion the Association adjourned until 9 a. m. Thursday.

April 15—Third Day—Morning Session.

The Association met at 9:15 a. m. and was called to order by Vice President Parker.

Dr. J. W. Brandau, Clarksville, read a paper entitled, "Morphin-Hyoscin Analgesia in Labor with Report of Cases." This paper was discussed by Drs. Rule, Barnett, Beasley, Padgett, and the discussion closed by the author of the paper.

Dr. J. M. T. Finney, Baltimore, Md., delivered his special address entitled, "The Diagnosis and Choice of Operation in Certain Affections of the Stomach and Duodenum."

At the conclusion of Dr. Finney's address, President Miller called upon Dr. Jere Crook,

Jackson, to thank Dr. Finney in the name of the Association. In doing so, Dr. Crook said: It is indeed a pleasing duty, at your request, Mr. President, to express on behalf of the Tennessee State Medical Association our most sincere appreciation for the masterly address of the distinguished President of the American College of Surgeons. We recognize in him a worthy and fit representative of that school which stands before the world as an exponent of the loftiest ideals and the highest attainments of the medical profession of the twentieth century.

We recognize in the subject he has presented to us this morning a disease fraught with high potential mortality, as well as the tremendous amount of inefficiency on account of a lack of early diagnosis. We recognize in this subject a disease which, if properly studied by the general practitioner, means many lives saved, and many years of health and great happiness to the individual.

It is, indeed, a pleasure on behalf of this Association to express our great satisfaction in having had this distinguished gentleman with us this morning. (Applause.)

The Secretary read the action taken by the House of Delegates in regard to the election of officers. For particulars see the proceedings of the House of Delegates.

Dr. Frank A. Jones, Dr. Battle Malone, Dr. William Britt Burns were appointed as a committee to escort the newly elected President to the platform, and Dr. G. C. Savage was asked to introduce him.

Dr. Savage said:

At the request of the President, because I have known Dr. Ellett for seventy-five years (laughter), I have been asked to present him to you.

The man who stands to my right (referring to Dr. Ellett) was born under a handicap. He was born in the city of Memphis. You know how few city boys ever make great men, but after all he was not very much handicapped, because I remember about the time he was a man squirrels were caught in the city of Memphis in the cotton fields and the potato patches. Memphis was only a village when this boy was born. (Laughter.) It has since grown to be a great city.

One of his amusements when he was a boy

was to get in a canoe, supplied with oars and rudder. He made it a point to have hold of the rudder and made the other fellows take hold of the oars, and I suspect there are people in Memphis who have witnessed him in this little boat with his hand on the udder. (Roars of laughter.) I have made a mistake. His mouth was on the udder and his hand on the rudder. (Laughter.) But the purpose I had in view in telling you about his boyhood experience was that you have placed him as the guiding hand of the great medical body of the state of Tennessee for the year on which we are entering. He has on his right and left about sixty oarsmen, about sixty county medical societies to assist him in his work. I want to tell you that Ellett will run that body in a straightforward direction and will avoid shoals on one side and rocks on the other, and carry it along the middle of the stream if these oarsmen will only do their duty.

It gives me very great pleasure to present to you the man into whose hands you have placed the rudder to guide the boat of medicine for the state of Tennessee. My friend Ellett is stepping into my tracks. He succeeds me remotely as President of this Association. He succeeds me this year as Chairman of the Section on Ophthalmology of the American Medical Association. He is a successor of whom I am proud, and I take great pleasure in introducing him to you as your chief oarsman, the guider of the great ship of medicine of the state of Tennessee. (Loud applause.)

Dr. Ellett, in accepting the presidency, said:

Mr. President and Gentlemen: Little did I think when I left the cotton patches or potato peels that such an honor would be conferred upon me. Were I an orator as Brutus, I would try to express my appreciation properly on this occasion. It is certainly an honor most gratifying to any one to receive the commendation of his colleagues in such manner as this, and while I am not here to detain you with any oratory, speaking for myself and for the medical profession to which I belong, I thank you very much for this great compliment. I will do my best

to discharge the duties of the office acceptably. (Applause.)

At this juncture, the retiring President, Dr. Miller, surrendered the gavel of the Association to Dr. Ellett, and congratulated the Association on the election of such a man to the presidency.

Dr. Jere Crook read a paper entitled, "Skin Grafting," which was discussed by Dr. J. M. T. Finney, and in closing by the author of the paper.

Dr. W. K. Vance, Bristol, read a paper entitled, "A Hoary-Headed Heresy."

Dr. E. D. Newell, Chattanooga, followed with a paper entitled, "Some Pertinent Points in Vascular Surgery," which was discussed by Dr. Cowden and in closing by the essayist.

On motion of Dr. Cowden, the Association adjourned until 2 p. m.

Third Day—Afternoon Session.

The Association reassembled at 2 p. m. and was called to order by the President.

Dr. J. W. Macquillan, Chattanooga, read a paper entitled, "The Epilepsies." The paper was discussed by Dr. Howlett and in closing by the author of the paper.

Dr. H. H. Shoulders, Nashville, read a paper entitled, "Some Facts Brought Out by the Operation of the Vital Statistics Law in Tennessee." This paper was discussed by Drs. Heizer, White, Howlett, Krauss, and discussion closed by the essayist.

Dr. W. Scott Farmer, Cookeville, read a paper entitled, "Chronic Leg Ulcers," which was discussed by Drs. King, Vance, Tarpley, and in closing by the author of the paper.

Dr. Jack Witherspoon, Nashville, read a paper entitled, "Dental Sepsis; X-Ray and Clinical Report of Cases." The paper was discussed by Dr. Kennon.

Dr. I. A. McSwain, Paris, read a paper entitled, "Inebriety in Its Relation to Criminology and Sociology."

Dr. J. M. King, Nashville, followed with a paper on "The Use of Autogenous Serum in Skin Diseases," which was discussed by Dr. J. Howard King and in closing by the author of the paper.

On motion, which was duly seconded and

carried, the Association then adjourned to meet in Knoxville in 1916.

OLIN WEST, M.D., Secretary.

MINUTES HOUSE OF DELEGATES.

Tuesday, April 13, 1915, 2:00 P. M.

The House of Delegates of the Tennessee State Medical Association was called to order by President Miller at 2:00 p. m., Tuesday, April 8, 1915.

The first order of business being the reading of the minutes of the last meeting, the President asked the members if they desired the minutes read.

Secretary West: Mr. President, the minutes of the previous meeting were published, as usual, in the Journal which came out immediately after the meeting, and they are rather lengthy. The usual procedure is to dispense with the reading of these minutes.

Moved and seconded that the reading of the minutes of the previous meeting be dispensed with. Carried unanimously.

President: The next item?

Secretary: Since the last meeting two county societies have been organized, one in Sullivan county and one in Morgan county. The charter for the Sullivan County Society was forwarded, but, as a matter of fact, under the Constitution and By-Laws, a charter can only be issued by this body, and I want to get the charter which was issued to the Sullivan County Society ratified by the House of Delegates, and also to be authorized to issue a charter to the Morgan County Medical Association, which has recently come into existence.

Dr. Malone of Memphis: I move, Mr. President, that we issue a charter for the Morgan County Society, and that we ratify the one issued to Sullivan County.

This motion seconded, the question put, and carried.

Secretary: This will entitle delegates from these two counties, Mr. President, to a seat in the House.

President: The next order of business is the appointment of the Nominating Committee.

Secretary: A five-minute recess is usually taken to allow the delegates from the various sections of the State to get together and nominate men for the Nominating Committee which is to name the various officers that are to be elected—three from each section of the State. Delegates from East Tennessee will confer and suggest men for the Nominating Committee from their section; and the others will proceed in the same manner, and will then report.

President Miller announced that a five-minute recess was allowed. At the expiration of that time the House was called to order by the President, who stated that the house was ready to receive reports.

Secretary: Dr. Malone, from West Tennessee, we will receive your report.

Dr. Battle Malone: I beg to report the Nominating Committee for West Tennessee as Battle Malone, O. Dulaney, M. Blanton.

Secretary: The Nominating Committee from Middle Tennessee is . M. Woodson, P. Bromberg, W. J. Breeding; that from East Tennessee is Dr. H. E. Goetz, C. J. Broyles, J. McC. Hogshead, of Chattanooga.

President: The next item of business is the report of the Secretary.

Secretary: Mr. President, Gentlemen—This report has been published in the Journal, and has also been printed in pamphlet form, and has been placed in the hands of nearly all the delegates, or placed where they could get it. It is rather a long report, because it includes a financial statement showing all collections. There are no disbursements by the office of the Secretary, except for incidental expenses. I do not think it would be worth while to take up the time of this body with reading the report, but there are some matters that I should like to refer to, so as to bring them to your attention. Unless the House of Delegates decides to hear this report, Mr. President, I won't read the whole thing, because it is already published.

President: That is with the House of Delegates.

Dr. C. J. Broyles, Johnson City: I move that the reading of the report of the Secretary be dispensed with.

Seconded, question put and carried.

Secretary: I would like to call attention to some features in the report. In the first place, I desire to call your attention to the statement that the membership for 1914 was the largest in the history of the Association (applause), 1,444 members to the first of January. This, as I stated in my report, I think is very largely due to the efforts of the former Secretary, Dr. Bromberg, and the Councilors, because I do not believe that there has ever been a time in the history of the Association when the Councilors have done more hard work, trying to get things in shape, and I feel sure that there has never been a more efficient Secretary than Dr. Bromberg was. While he served for four years, I believe I am in position to know that it took that long for the results that came from his work to fully materialize.

The next matter to which I should like to call your attention is the third paragraph in the report, the statement to the effect that the Secretary is not kept properly informed as to the movement of the members, deaths, removals, and other items. We have tried in the Journal to have a department of personal items, called the "Notes and Comment Column," but we have had to depend for matter in that column on just what we hear incidentally, and what we pick up from newspapers and otherwise. The men in the Association are interested in each other, and it would be helpful to the Journal if we could have furnished to the office of the Secretary items of interest in the various counties about the doings and goings and comings of the individual members. It would certainly be an important record if we could keep the correct list of the members who die during the year. This we can not do, because we do not know who dies, and who does not. Insofar as we know, nine active members and two honorary members have died since the last meeting.

Several counties have shown a loss in membership, as compared with 1913. A few counties have shown a gain, that is for 1914, you understand—the year ending December 31, 1914. In some of the counties the loss is really not as large as it would appear, and was brought about by the fact that the officers of some County Associations took it upon themselves to pay dues for a large number

of men, and some of that large number of men never did reimburse the officers. As a consequence, they were carried as members in 1913 and were not carried in 1914, because whoever was elected in 1914 did not feel called upon to dig down in their pockets and pay the membership dues for some dead timber that had had dues paid for them before. We think that this is a very vicious mistake, for the officers of the Association to pay dues for other men.

The Committee on Medical Defense will report, and it is unnecessary for me to make any reference to that except that a great number of men have not paid the assessment for medical defense, and will not. I think that this is a matter that must receive serious consideration at the hands of this body, because last year action was taken by the House of Delegates making the payment of this assessment compulsory. As a matter of fact, the committee and your Secretary have ignored that action by reason of the fact that had we enforced it we would not have but 600 paid men, whereas now we have 1,198 paid for 1915, up to the first of April. That, however, is to come up in the report of the Committee on Medical Defense, but I mention it simply because the Secretary must be informed about this particular matter.

When your present Secretary was inducted into office he found that Dr. Bromberg had used his own personal property for carrying on the business of the Association, in the way of office furniture, etc. Inasmuch as I had none, I had to purchase, and we have now in 306 First National Bank building an office that is comparatively well equipped. Our records are in good shape, so that they can be easily examined at any time, and I think that we are able to show every detail right up to the minute at any time. We hope that members will feel perfectly free to come to that office and make it their headquarters when in the city.

In regard to the handling of funds. All funds, practically, are paid into the office of the Secretary, and immediately transferred to the Treasurer. He disburses everything that is paid out.

The receipts of the Journal for advertising were \$2,455.66 to the first of April. Since that

time we have had perhaps \$75.00 or \$80.00 collected on the March advertising accounts, maybe a little more or a little less. Now we think that is fairly satisfactory. We believe that the advertising receipts of the Journal could be very materially increased, or, at any rate, we believe that our advertising patronage could be rendered much more secure if we could get just a little more co-operation upon the part of the members of the Association. The advertising pages of the Journal are clean. The last advertisement which we felt was not right up to the notch has been cut out. The rest of them, so far as we are able to tell after conscientious effort, are just exactly what they pretend to be. Our advertisers are the best firms in business. We believe they are entitled to the patronage of the members of the Association, and we absolutely know, as well as we can know a thing, that if they get the patronage of the members of this Association they will continue to advertise with us, and we will be able to get larger patronage. This is a matter of importance. Of course we do not run the Journal for money—everybody understands that—but the more money we get, the better Journal we can have. It would be an easy matter for you, if you want to buy an instrument, or use some food, one of the foods so extensively used, or if you want to buy some other article, to buy from those who advertise in the Journal. This is a matter of great importance, so far as the success of the Journal is concerned. This advertising income has heretofore about paid for the Secretary's salary, the salary of the stenographer the office rent, practically all of the incidental expenses of the office, for furnishing the office, and for commissions on advertisements. The statement is made in this report that after commissions are deducted the advertising income has not been sufficient to meet these expenses, but that is not true. The advertising income has just about been sufficient to meet all of the expenses, counting a balance that was handed over by the former Secretary.

We have in the Journal a directory—a Physicians' Directory—which has been a source of some income. There is a disposition on the part of a number of members to condemn the practice of running this Physicians' Directory. I think it is all right. I notice that the best

journals of the country have a physicians' directory which is patronized by a much larger number of men in the Associations than is ours. I will say, however, that we could have had more cards in ours, but were afraid to take them, for fear we might have to cut them off at this meeting, and did not care to take them under those conditions. I should like to have an expression at the proper time from this body about this Physicians' Directory, so it can be presented to the Board of Trustees, whether we shall continue it and try to get other announcements, or whether we shall discontinue it.

The cost of the Journal of 1914 was greater than ever before, because we could not get the old contract renewed, nor could we get a bid anywhere near the figure of the old contract. It has cost us in flat figures, for the absolute printing of the Journal, \$200.00 per month, and the last number of the Journal, containing an extra number of pages, cost extra on that account. That is an increase of a little over \$20.00 a month over the year before. Now, at the time this contract was made the country was in pretty prosperous condition, and the printers had all they could do, and none of them cared so very much whether they got this job or not. I think for the ensuing year we will be able to make a contract more favorable to the Association.

The cost of the delivery of the Journal is perhaps more than most of you would think. It costs somewhere from eight to ten or twelve dollars a month for delivering all of the copies of the Journal.

I am persuaded to believe, Mr. President and Gentlemen, that if the Journal is to be enlarged and improved very materially, that a larger investment will have to be made in it. For instance, we have to depend for our advertising patronage upon what can be brought to us by a local representative, who can only give part of his time to it, because we cannot pay him enough to give all of his time to it, and there is not enough of it; and the Co-operative Medical Advertising Bureau, which is a department of the American Medical Society, also sends us some good accounts. If we had a business manager, or some advertising representative who could be paid enough to make it worth his while, I think

that we could considerably increase the income from that source. This is a matter that is going to have to be considered soon or later, and I mention it so that you may think about it.

Mr. President and Gentlemen, the effort has been to make the Journal worth something to the rank and file of the members of the Association. It is no easy job to get the Journal out. It takes a tremendous amount of work. Our correspondence, for instance, has grown to enormous proportions, comparatively speaking. It is no unusual thing for us to send out forty or fifty letters a day from the office of the Journal, and the detail clerical work is tremendously larger than most of you would suspect.

As to how much success has come to us in our efforts, you are able to judge. We desire to say that we have had the most earnest co-operation from a large number of the county secretaries and individual members. That, of course, has been very deeply appreciated.

I do not believe, Mr. President and gentlemen, that there is anything else which is not definitely shown in this statement that it would be worth while for me to take up the time of the body with any further.

I would say there have been some unusual expenses this year, on account of various matters—for instance, the Legislative Committee. We are going to take care of the expenses that they have been put to, which are comparatively insignificant, but still amount to a good deal where you have a total gross income of only about \$4,000 a year. There are one or two other items, but we will be able to take care of them without any harm being done at all. (Applause).

President: You have the written report of the Secretary and his illuminating remarks on that report. What disposition will you make of this report?

Dr. J. L. Crook: That it be received and spread upon the minutes.

This motion seconded, prevailed, and the report was received.

(This report was published in the April Journal).

President: The report of the Treasurer is the next item of business.

Secretary: Dr. Cowden does not seem to be here, but his report is made up complete to the first of April. He will present it at any time that it may be called for when he is here.

President: We will pass over this report, and take it up at a subsequent time. Next on the program is the appointment of an Auditing Committee.

Secretary: I suggest that that be postponed until after Dr. Cowden's report has been made.

President: The appointment of the committee might be made, and they can take any action. We will now appoint this committee, but the committee can not act until after the report of Dr. Cowden, to be sure. In what way is that committee appointed?

Secretary: Appointed by the President.

President: Just assume that it has been made. Now we will have the report of the Committee on Public Policy and Legislation—Dr. McCabe.

This report was read by Secretary West as follows:

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

Mr. President and Members of the House of Delegates:

Your Committee on Public Policy and Legislation wishes to report that it was successful in having an Act passed by the present legislature and signed by Governor Rye creating a Board of Preliminary Examination. A copy of the Act is attached to this report. The only opposition to the passage of the Act came from the State Board of Medical Examiners. These gentlemen appeared in Nashville and used their influence against the passage of the bill. Drs. McCreary and Woodyard, however, after having the Act explained to them, left the city and telegraphed the members of their delegation to support the bill.

At a joint meeting of the Sanitation Committee of the Senate and House speeches were made in opposition to the bill by Judge John A. Pitts and Dr. A. B. DeLoach, Secretary of the State Board of Medical Examiners. Drs. John A. Witherspoon, Holland M. Tigert, and Professor Brown Ayers made speeches advocating the passage of the bill.

Dr. A. B. DeLoach appeared before the Memphis and Shelby County Medical Society and succeeded in having a resolution passed criticising the bill and requesting the Shelby County delegation to vote and use its influence against the passage of the Act.

As far as your Committee is aware there was no other opposition, and your committee was delighted

with the response to its call for aid from other sections of the state.

In the House the bill was championed by every physician except Dr. Horn, of Shelby County. Speeches were made, urging the passage of the bill by Dr. Hawk and Representatives Stewart, Shropshire, Elkins and Ward.

In the Senate Dr. Parks and Senator Parkes Worley led the fight for the adoption of the Act, and the bill passed this branch of the legislature with only one dissenting vote.

Drs. West, Lilliard, Sanders, and Flanary did excellent work and should be commended by the House of Delegates.

An Act regulating osteopathy was amended to meet the requirements of the Act creating the Board of Preliminary Examination and then failed to pass in the House for want of a constitutional majority. A motion to reconsider is still active and an attempt may be made to pass the bill after the recess.

A bill regulating Naturopathy has been recommended for rejection by the Sanitation Committee of the House.

A bill regulating the sale of alcohol by druggists has been signed by the Governor, and is a law.

A bill prohibiting the sale, bartering, or giving away of heroin is still in the committee and will probably be recommended for rejection.

A bill prohibiting the use of wood alcohol in preparation for internal or external use was amended to exclude liniments, etc., and re-referred to the Sanitation Committee of the House. It will probably be recommended for rejection.

Your committee in concluding wishes to most heartily thank Messrs. Hill McAlister and E. J. Smith for drawing the Act creating a Board of Preliminary Examiners, and for legal advice whenever requested. Messrs. McAlister and Smith's work was given gratis. We also wish to thank both physicians and laymen for their interest in and support of an Act which raised Tennessee to the place where she rightfully belongs, and places upon the statute books of this great commonwealth the best law for the regulation of the healing art in any state in the Union.

W. M. McCABE, Chairman,
W. C. DIXON,
H. M. TIGERT.

April 13, 1915.

At the conclusion of this report the Secretary stated that the bill attached was quite long, and inquired if it was the pleasure of the House that it should be read. (This will be printed in the Journal for June).

Dr. Woodson, of Memphis: I move that the reading of the bill be dispensed with.

Seconded.

President: The question before the house

is now open for discussion, if you wish to discuss it.

Dr. Savage: I have read the bill carefully, and I came to the end of that bill impressed with what appeared to me to be a fact, that the work of this Board is at the wrong end of the line.

President: Will you pardon me. The matter has already been settled. That bill has become a law.

Dr. Savage: I wanted to have my mind cleared up on it. I am sure that others are in doubt, also, but I have been told by one of the men constituting the Legislative Committee that it works at both ends of the line. If it does, it is all right. For instance, if our young men—

A Delegate: I do not think the merits or demerits of this bill should be discussed before this House of Delegates. This bill is now a law. The question which Dr. Savage must discuss is whether this bill shall be read or not.

President: The question is whether this bill shall be read. The motion is to dispense with the reading of the bill.

The motion was carried, and the reading of the bill ordered dispensed with.

Dr. Bromberg: I move that the committee's report be received.

Motion put and carried, and report accepted.

Dr. Savage: Now, Mr. President, may I ask for a little clearance of the atmosphere?

President: There is nothing before the house now.

Dr. Savage: If the bill as passed is understood correctly by me, it means that our young men will be permitted to enter college, spend a thousand dollars a year for four years and at the end of that time have to appear before the Educational Board. Now, if the bill does not mean that I fail to get it from the reading. Now, if it means that our young men can go before this Board before they take up the study of medicine at all, thus saving themselves four years' work and expense in case they failed, then that would be a different thing and that would be all right. That is where you will catch the osteopaths and other "paths," but our young men should not be permitted to enter college and spend

\$4,000, only to fail on the literary examination at the end.

Dr. Tigert: The point that Dr. Savage brings up, as the bill was originally written, was not covered specifically. It was simply left discretionary with the Board, and the committee is indebted to Dr. DeLoach, who discussed the bill with us on one of his visits, for the suggestion that was finally incorporated in the bill on that point, which reads as follows: "And shall transmit to the Board his or her general educational credentials."

Dr. Savage: I read the original bill. This bill meets with my hearty approval. I move that a vote of thanks be extended to the committee for the bill as passed. (Seconded.)

President: You have heard the motion, that a vote of thanks be accorded this committee for the very efficient service it has rendered. All in favor of the motion make it known by saying "Aye," all opposed "No."

Motion prevailed.

President: And I am glad that Dr. Savage is satisfied.

Dr. Savage: There were others that were not quite clear in their minds.

President: The next order of business is the report of the Committee on Memoirs.

Dr. Woodyard: I would like to have until tomorrow morning to complete my report.

President: Dr. Woodyard asks for tomorrow to complete his report. Does the House of Delegates consent to the delaying of the report?

Without objection, it is postponed until tomorrow.

We will now have the report of the Committee on Tuberculosis.

Secretary: The Chairman is in the other room.

President: What shall be done with this?

Secretary: The Committee on Tuberculosis has really been inactive for several years, because the Association has never given them anything to do.

President: We will pass over that to the next item, the report of the Committee on Public Health and Public Instruction.

Secretary: This is a new committee established at the request of the American Medical Association, composed of five mem-

bers, with Dr. S. S. Crockett of Nashville as Chairman. If the committee has done anything, I am not informed about it, and Dr. Crockett is not here today.

Without objection, the report of this committee was passed over.

President: Report of Committee on Scientific Work. The Secretary is Chairman of this committee.

Secretary: The only report we have to make is that we have a program of sixty-two papers, and to further report that it took a whole lot of work to get so many, and a whole lot more work to stop them. We lost considerable sleep trying to get forty-eight papers, and after we got forty-eight, we lost a whole lot more sleep trying to keep from getting four or five hundred. The program was made as has been done heretofore. The committee was composed of the Secretary as Chairman, Dr. Sheddan of East Tennessee, and Dr. Crisler of West Tennessee. These two gentlemen rendered very valuable assistance, but most of the work was done through the Secretary's office. The President of the Association also gave his aid to the compilation of the program. Members have responded most generously indeed and in a way that the committee truly appreciates. The biggest trouble has been to get papers from men outside of the cities. An especial effort was made in this direction, but it met with comparative failure. As early as May last year we went to work to try to get men in the country and in the smaller towns and cities to agree to contribute to this program, but a careful perusal of the program will show beyond any doubt that very few of those responded. We regret that, because we would like to have a more balanced program in that particular. I believe, sir, that this is the extent of the report we have to make.

Dr. Malone: I move that the report of the committee be accepted.

Seconded.

Dr. Savage: I have only one criticism of the report, and that is one that I know is in the hearts and minds of others, that is the number of invited guests. I do not believe that we ought to have as many invited guests to read papers for us as we have had

the year before and have for this time. An invited guest now and then, if he is not too numerous, will appreciate the honor, but if there are many of them the honor is not appreciated as much as it otherwise would be. I speak feelingly on this point, because only recently I was invited to deliver an address before a medical society in a sister state, and when I got to that meeting there were thirteen other invited guests, and I tell you, if I had known it before I left home I would not have gone. That was the Medical Association of Virginia, North Carolina and South Carolina in its recent meeting at Charleston. It is unfair to a meeting to have so much of its time taken up by its invited guests, and that is the reason for it, after all, and I spring that point here. If no action is taken looking to the future, it is all right with me. I am only suggesting it. I know it is not the thing to do, pointing towards the guests themselves, if they are too numerous, nor is it the thing to do pointing towards the members of the Association, who are numerous enough and able enough to take care of the larger part of the program themselves.

Dr. Tigert: I want to say a word with reference to what Dr. Savage has just said. There are two sides to that question—certainly I do not think it fair to our Secretary, who has struggled to produce as good a program as possible, to pass this criticism on him, especially when I am satisfied a good many men here do not feel that it is entirely justified. I know that I, for one, do not. Whatever one's opinion may be with reference to invited guests, certainly we all know it is one of the great drawing cards to our meetings, and one thing that we have been trying to get is attendance. I think that the contributions of these guests, scattered, as they are, at intervals throughout the program, really add a great deal to our medical and scientific program. I, for one, do not concur in the criticism at all, and I believe that there are others here who do not concur in it. I believe the more men we bring in here the better it is for the Association. We certainly do not bring men here simply to be amused by looking at them. They have a message to deliver. We learn things by listening to these men, and I am heartily glad

to have them with us, and would be willing to see more invited next time.

President: Any further discussion of this question?

Dr. Crook: I believe Dr. Savage did not mean any criticism on the Secretary, and while I would not in any sense want to criticise the present program, because it is magnificent, yet, in general terms, I believe everything Dr. Savage has said is absolutely true. A good many men organized the Southern Medical Association in order that the Southern men might have an opportunity of having a field to exploit their talents, and as inspiration for the very best work, and while we enjoy the invited guests, we certainly try to fill our program, as far as possible, from home talent. Not that we feel that we can not learn something from these great teachers, but we feel that if a man is on the program himself he of necessity must study up and prepare himself to discuss the subject, and defend any position he make take. From an educational standpoint, and to make the individual man work, I believe in filling the program with talent from our own membership. Another thing, when the program is largely made up of noted men from the outside, the members, and especially those from the smaller places, would feel that their efforts would suffer by comparison—a feeling which he might not have if the program were largely confined to home talent, or to men in our own state. So, without any spirit of criticism at all toward our present program, I think it is a splendid idea, for the reasons stated, not to have too many invited guests. We do not want to divide the honor up until the guest does not appreciate it, because there are courtesies due these men, and they take up about four times the ordinary time, and some of this time should be consumed by our own members.

Dr. Burns of Memphis: I want to take the side of Dr. Tigert in the discussion, for the reason that down at Memphis we have an opportunity to attend three state societies, and I know that just this same feeling exhibited here by Dr. Savage has brought about a great deal of hard feeling, and a great deal of clannishness in our different state societies bordering on Memphis. I think we ought

to have invited guests. I think it is all right, the proper spirit. I know I am always glad to visit the Mississippi State and the Arkansas State Societies, and am always glad to see visitors from those states at our societies. We also have a Tri-State Society down there where they come from three states, and we enjoy those meetings, and it is just for this reason that it looks like selfishness to me. I think that we ought to get out of this clannishness of wanting everything for ourselves, and I believe that we ought to invite these guests.

Dr. Dulaney of Dyersburg: I hardly think it is necessary to criticise the Secretary, the Program Committee, or anyone else. The main idea, we know, of the Secretary and these officers is to be governed by the wishes of the House of Delegates and the members. I am sure that the Scientific Committee will endeavor at all times to do their level best to please the majority, and there is no way in the world for them to satisfy, except to come before the House of Delegates and find out their desires. I am sure it is not the desire of Dr. West to inflict punishment on any of the members of this Association by inviting too many guests, or anything of the kind; but in the endeavor to furnish a really first class program, it has been customary for some time, and it has certainly been beneficial to the society, to invite men of different specialties to address the society. I know that I myself am always glad to come here and listen to some man who has a national reputation, and I think the majority of surgeons are in the same boat. However, we do not wish to handicap the Scientific Committee in any way, but I am sure they would be glad in the future to be governed by the House of Delegates, and I think if the House of Delegates desires to eliminate the guests, a suggestion to the Scientific Committee is all that is necessary for future guidance, without entering into a discussion of what has been done in the past.

President: The question before the House is upon the receipt of the report of the Committee on Scientific Work.

Without dissent, it was agreed that the report be accepted.

Dr. Gallagher: I move that a vote of thanks be given the Program Committee for the magnificent program that they have arranged for this meeting.

Seconded and carried.

Dr. Tigert: I move that the House of Delegates stand adjourned until 8 o'clock Wednesday morning.

Seconded and carried.

Adjourned to meet at 8 a. m., Wednesday, April 14, 1915.

At 8 a. m. the House of Delegates was called to order by the President.

President: I want to request the members of the Council to remain in this hall for meeting immediately after the adjournment of the House of Delegates.

The first item of business this morning is the report of the Committee on Medical Defense. Dr. S. R. Miller is Chairman of that committee. He will now give you his report.

Dr. S. R. Miller:

REPORT OF COMMITTEE ON MEDICAL DEFENSE.

To the President and the House of Delegates of the Tennessee State Medical Association:

Your Committee on Medical Defense begs to submit the first report of the work which began with the beginning of this calendar year.

We were instructed to make such plans and regulations as we thought proper. After the appointment of the committee, in Memphis, the members met and discussed the committee's organization and plans. S. M. Miller was made Chairman, H. M. Tigert, Secretary, and Jere L. Crook, Treasurer.

Shields and Cates, of Knoxville, were employed as general counsel for the year 1915. In addition to acting as general counsel, they will, without additional expense, defend all of our suits for malpractice brought in the courts of their resident county. They will supervise all other malpractice suits brought against our members, and will employ proper counsel, and direct the suits defended outside of their resident county. They will have no additional fees, except they be required to go out of the state, in which event they will be paid a reasonable fee for such work. At the end of the year their work will end as general counsel, but they, as other attorneys who shall have been employed, in pending suits, will continue as counsel of such until the final issue of that particular suit. The general counsel, however, shall have supervision over all cases during the calendar year for which they are employed to act as general counsel.

It is the plan of the committee that all of the

dollar per capita assessment fee be delivered to the Chairman of the committee, and that the member's protection begins from noon on the day of its receipt by the Chairman to the close of the year 1915, and, in order to keep accurate accounts, a book has been opened in which is recorded each payment, and the date and by whom paid, and each check is stamped on the back in such a manner that the stamp will serve as a receipt, but similar and separate receipts have been given for cash and postal money order payments. The members of each county are recorded together, and each payment is credited to that particular member, giving the date, and by whom or how paid, and special care has been taken to record accurately the date of each payment, as the individual member is protected from that date. The Chairman has endorsed all checks, and forwarded all checks and cash to the treasurer of the committee. The latter has made bond for one thousand (\$1,000) dollars, and the same was delivered by the Chairman of the committee to the Secretary of the Association for keeping with the papers and records of the Association.

To and including April 10, 604 members have paid the assessment fee of one dollar, and Exhibit A., file herewith, is the itemized list of the record of each organized county. Thus you will see that only one county, namely, Monroe, has paid for each and every member, and of the sixty odd counties organized, fifteen counties have not had a member to avail themselves of this Medical Defense, and eight counties have each had only one member to pay a Medical Defense assessment. The members have been rather slow to avail themselves of this splendid opportunity offered by the Association, and we believe that it is for two or three reasons: First, it is new and not fully understood by the majority of our members, notwithstanding the fact that the committee has tried to make it clear to all who read the Journal, and who attended their County Societies. Another reason is, that many members are already protected by physicians' liability policies, still in force, and another reason is, the usual indifference shown by many physicians to ordinary business matters.

There is a feeling among some members that the assessment fee should be compulsory, but the Chairman feels that better co-operation can be obtained by making it rather optional with the individual member. Such a plan requires more labor on the part of the committee, but will secure members who give best care to their professional and business matters, and are therefore the best risks that we have. Any plan other than this, at this time, will create considerable dissatisfaction among a large majority of our members, and we believe this feature of our work will gradually become more popular until a large majority, and practically all of the more desirable of our members, will be prompt in availing themselves of this protection.

The committee has endeavored to make as few rules as possible, in order not to complicate the

work, but have only made such rules and regulations as will enable them to conduct this part of the Association's work on a conservative business basis.

We ask that this body will not handicap the committee with any unusual limitations or obligations, or do anything that will make the work unpopular with the rank and file of the membership, or restrict the freedom of the membership of the component County Societies.

S. R. MILLER,
H. M. TIGERT,
JERE L. CROOK,

"EXHIBIT A."

LIST OF COUNTIES, MEMBERSHIP, NUMBER
PAYING FOR MEDICAL DEFENSE.

County	Paid Medical Defense	Member- ship 1915
Anderson	13	12
Bedford	15	18
Blount	2	2
Campbell	1	12
Carroll	17	20
Chester	0	12
Cocke	0	0
Crockett	0	11
Cumberland	5	5
Davidson	116	125
Dyer	14	23
Fayette	1	14
Franklin	0	8
Gibson	20	24
Giles	17	23
Greene	1	27
Grundy	8	8
Hamblen	9	14
Hamilton	16	76
Hardeman	1	12
Haywood	8	8
Henderson	4	25
Henry	1	7
Hickman	0	7
Jackson	11	12
Jefferson	12	16
Knox	57	104
Lake	1	8
Lauderdale	0	22
Lincoln	14	24
Loudon	1	7
McMinn	1	14
McNairy	5	17
Macon	0	8
Madison	28	28
Marshall	16	22
Maury	0	21
Monroe	10	10
Montgomery	6	9
Morgan	0	5
Oblon	0	15
Overton	3	10

Polk	0	8
Putnam	17	20
Rhea	6	6
Roane	10	14
Robertson	6	23
Rutherford	0	19
Sevier	0	5
Shelby	50	150
Smith	0	14
Stewart	0	0
Sullivan	5	16
Sumner	13	13
Tipton	10	20
Unicoi	0	0
Warren	4	8
Washington	10	23
Weakly	10	15
White	13	14
Williamson	7	14
Wilson	3	12

(Note:—This statement of 1915 membership was compiled by the Secretary and shows that the statement of the committee that only one county had paid the assessment for the entire membership is in error.)

I will say that I presume the work of the committee ends here. I do not know whether it was intended that the committee, as appointed at Memphis, would continue to the end of 1915, or whether their successors would be appointed in this meeting. Certainly the committee is not a self-perpetuating affair, and it remains for this body to appoint the successors. If any member has any doubt about his County Secretary transmitting funds to the Chairman of the committee, he can find this out right here, as we have the book and can refer to it and find out. The different counties I have here—for instance, take Knox County, the county with which I am most familiar, of course, fifty-seven members have paid. We have about 108 or 109 members. One hundred and four have reported now, the best record the county has ever made. Of that number about fifty or fifty-one have not paid. I will say that I would not consider, if I were in the insurance business, more than about fifteen, or at the outside twenty, of that fifty-one as good risks. Some of these men are very careless and indifferent about their work. They are good men in their community, but they do not get up the details of their work very carefully, and I assume that on account of that they would be more open to a suit

than the man who has his cases up and his business in good shape.

So the matter is now before the House of Delegates, and I hope that you will feel free to discuss any questions that may present themselves to you here, but we feel that, at the present rate, if one suit is brought that it will exhaust our treasury. We will have perhaps \$100.00 expenses, besides the joint counsel, that will be \$300.00, and we have collected only \$604 up to last Saturday night. There was another \$5.00 check came in through the State Secretary from Shelby County, which does not come in this. I will say that my secretary at home has full instructions whenever a check comes in there to stamp that check at once, and we have a record of it. It makes no difference when it is entered on the book, the record is on the check, and before the check is ever endorsed a record is made on its back.

There is one other matter that has not been discussed fully by the committee, though we have had considerable correspondence on the matter, that is, a good many members asked that the committee see if some insurance company would not issue a special physician's liability policy for the members protected by this Association. Now some state societies object to that very much, and I had an extensive correspondence with the committee from Kentucky, the Chairman of which is now the President of the Kentucky State Medical Association, and he is very much against it. But as this request has come in from different sources, from perhaps a score of men, we decided to comply with their request. We wrote to four companies. Two of them said that they would quit business in the state of Tennessee at the expiration of their year; that they were doing business then. I don't know whether that was the calendar year or not, though it was in 1914, that this correspondence took place. As you all know, the insurance companies charge from \$10 to \$25 as physician's liability premiums. Two or three men that I know of have policies for \$10, but that is because they made a contract back a number of years ago. It is with the greatest difficulty now that you can find a company that will insure the average physician for \$15.

I have heard from the Georgia Casualty Co., and I will say that I have not investigated this company, I have taken the word of the General Agent, who, by the way, is a physician, and was in active practice until about five years ago, and who says that this company has a large backing. Its home is Macon, Ga., it is a Southern company. It would be the proper thing to investigate this company before the Insurance Commissioner of the State before any permanent or definite arrangements are made, but I take it that they have complied with the laws of the state, and are really doing considerable business.

I suppose there is no need of my reading this letter that I wrote about this matter, but I do think it ought to be kept as a part of the file, and especially if the Society wishes to adopt anything of the kind. I do not think this ought to be a part of the committee's work. I do not think we ought to have any connection with it, except to furnish the insurance company the names of those who are eligible, and let them act independently, otherwise we would be a party to it to a certain extent, and our witnesses would not be available, and we would want our witnesses merely to defend the man's good character and see that justice is obtained in any suit. If the man is guilty, why, then, he will have to suffer for it; but if he is not guilty, then we will have to see that something is not shouldered on him that is not just. (Applause.)

President: You have heard the reading of this report. What disposition shall be made of it?

Dr. W. J. Breeding: I move that we accept the report and that a vote of thanks be tendered this committee for its work.

Seconded.

President: The matter is now open for discussion.

Dr. Crook: The point I wish to call special attention to is the part of the report in which the committee was in doubt as to the proper method of procedure. I believe the report stated in Memphis last year, after discussing the matter at some length, and getting a report of the Kentucky State Medical Society of Dr. Moren, who was in charge at that time, was decided that unless we could take some definite action to make it compulsory, or at

least an integral part of the state dues, it would not pay to undertake it, because, not knowing even the potential revenue we might get, we would not be on a business basis. If I remember correctly—I would like for the Secretary to please look at the minute—I believe it was definitely passed that a man, to be in good standing with the Tennessee State Medical Society, would have to pay his dues.

We are in a very anomalous position, as the report has brought out. We have accepted \$604.00 from 604 members, and we have about 840 who have not paid. We said a year ago that unless they did pay that dollar they would not be in good standing. The Chairman is of opinion we had better go slow on this, and not push things too much, and when he first read the report to me I was inclined to differ from him, because I felt that we ought to either have this medical defense, or simply quit, one or the other, if we cannot have some method of not exactly enforcing, but making a man feel that he is obligated to pay this dollar. We cannot even defend a single malpractice suit, because they are expensive luxuries. We have only collected \$604.00 out of a membership of 1,444, and if we had a fund of \$1,444 we might be able to defend one suit, but if we had a suit now we could not defend that, and this year we have had hanging over the membership the threat that if they did not pay it, they would not be in good standing. If we can only collect \$604.00 with the membership feeling, and a minute showing that it is compulsory, if we made it optional where would we be?

I am one member who is absolutely at sea as to what we should do, and I think we ought to have the benefit of the suggestions of the House of Delegates on this, and decide to either have it or not to have it.

Dr. McSwain: Even if every member of the Society pays \$1.00 we would not defend many malpractice suits, if the membership of this Society is 1,444. Instead of making it \$1.00, and expecting it to pay the expenses of suit, we need about \$5.00 from each member to make the funds worth anything. I do not see how you expect to make it pay anything. One or two malpractice suits, as I understand, would wipe out the contents of our treasury, and then some.

Dr. Crook: I had a long talk with Dr. Moren, and he said that the thing was self-sustaining. For instance, they have one malpractice suit, and then the fund accumulates. Possibly it would be the third year before they had another. Their five-year reports show that it has taken care of the whole business. But they have a big membership—about 2,000 men.

Dr. McSwain: What do they charge?

Dr. Crook: One dollar.

Dr. Miller: We do not pay the damages. We only agree to pay the legal cost.

Dr. McSwain: I understand, but that would entail a cost of at least four or five thousand dollars for each suit.

Secretary: Mr. President, and gentlemen of the House: This matter is of very great importance, as you all realize, and it is one to which this committee and your Secretary have given considerable careful thought, and one which has produced a great deal of anxiety in our minds. By the way, I want to take the time to say I have never seen more faithful service rendered anywhere than has been rendered by this committee, and especially the Chairman, Dr. S. R. Miller. He has taken the same interest in this matter that he would take in his own personal business, and Dr. Crook and Dr. Tigert have both given the matter careful attention. As Dr. Crook says, the action of the House of Delegates last year at Memphis was to the effect that every member of the State Society should pay this one dollar assessment, if they would be members of the Association. Membership was based upon the payment of this \$1.00 assessment along with the \$2.00 membership dues. The report here shows how much attention the membership of the Association have paid to the action of the House of Delegates last year.

Now there are a great many in the Society who feel that this whole proposition is wrong. There are a great many in the Society who have the most erroneous notions about this thing. For instance, some of the best men in the state believe this is simply a scheme of the surgeons of the cities to protect themselves at the expense of the country practitioner, and so far we have been wholly unable to disabuse their minds of this idea. The fact remains that some of the best men in the Association believe

that thing, and believing that, you know as well as I do that they are not going to pay their dollar. Now we have one or two societies in the state, I do not know just how many, because I am not in position to know who has paid the defense fee, unless transmitted through the Secretary's office, but we have some Societies, I know, in which every single member in the Society is opposed to this plan of medical defense. We have only one Society, as the report of the committee has told you, in which every man is in favor of Medical Defense.

Now when you come to talk about what Kentucky and other states have done, there are so many qualifying statements that must be made in connection with all of this matter that it is right hard to arrive at a definite conclusion from that precedent as to what we ought to do. There are states that have made most brilliant successes of this medical defense. To some of them the services of the attorneys are given absolutely gratis. There are other states that have required as much as ten dollars, I am told, per member per year, and you know that you might just as well try to sink the English navy as to try to get ten dollars a member out of this Association. (Laughter.) As a matter of fact, it is worse than trying to wind up the moon to get two dollars out of them—that I don't mean literally, gentlemen, but just "paregorically" speaking. But, as a matter of fact, the figures show for themselves, and \$604.00, as Dr. Crook says, is not going to be enough. If we have about four suits piled on top of us at once, then somebody has got to pay the difference. Now I know about four or five of those suits that are pending right now, and I want to tell you, incidentally, that those fellows are the very first ones that paid the assessment.

I think this matter should have full and free discussion, and I believe with Dr. Crook that we ought to do something, and do it this morning, and do something absolutely definite and positive. Either put this thing on its feet and carry it through, or quit. Now just one of these two things we must do, because with \$604.00 you can't go anywhere, and I believe if we are going to make a fizzle we had better quit right now.

Dr. Goetz: I expect there may be some of

the members of the State Society have failed to understand this proposition, just about like I did. I paid my annual dues. I did not know it was compulsory to pay this dollar, but I did pay the dollar because I wanted the insurance. I did not understand that the House of Delegates, or anybody else, had made it my duty to pay that dollar. I thought I paid that dollar as a matter of personal protection, and for that reason only. I did not know it was compulsory. Now that I have been let into the light of the matter, I look at it differently from what I did then. I now look at it as a debt I owe the Society and I owe every member in the Society, to pay that dollar and keep alive insurance that every member in the Society needs. Some of them may think they do not need it, but they do. Now if this body has made it compulsory, and the duty of a member to pay this dollar, then it becomes just as much his duty to pay that dollar in order to be in good standing as to pay the other \$2.00, and I don't believe you need have any fear of disrupting the Society or causing the country practitioner to leave the Society, because he is afraid of being imposed on by the city surgeon.

Dr. Yarbrough: I think if our Secretary could incorporate that in the official receipt, and say "Medical Defense for 1916," we would have no trouble in collecting the one dollar, and then the State Medical Association dues; or, if we could make the whole thing about \$2.50, why, down in the cotton section, I think we could get every member in each county to take it; otherwise, I think the majority in each county will pay the \$3.00, and make the medical defense, just as I advise them to either make it, or put their property in the wife's name, and then I will help get a divorce. (Laughter.)

Dr. Noblitt: In the meeting of our Society it was first announced that it was compulsory, and the Secretary had some correspondence with some one, I really could not tell you who, and it was later announced in our Society that it was optional. I paid the \$1.00, of course, but the Society was about equally divided, and some were opposed to it, and did not take it. Of course I really could not tell you how many there were that paid the dollar, but I know they were about equally divided. Some would

have paid it if it had been insisted that it was compulsory—more would have paid than did—but that represents the feelings of the members in Lincoln County, that it was changed, that it was first made compulsory, and reconsidered. That is the way it was presented to our society.

Secretary: I think I can explain that. I wrote a number of the secretaries who wrote me about it. In view of the fact that some of the men in a great many of the counties were absolutely refusing to take it, of course, I could not tell them that it was being enforced all over the state, and just had to leave it to them.

Dr. Noblett: That was the opinion, and I think possibly some few members will absolutely refuse to pay the dollar. I can't be sure about that, but I just felt like it was my duty to say how we were feeling about it in Lincoln County, and how we had been instructed, the view we took.

Dr. Burns: Mr. President, I imagine that a good many of the members in a good many of the county societies are in the same position that I personally have been. I did not happen to be present when the matter was brought up at our county society, and I did not happen to see the number of the Journal that contained the information, and I did not know we had any medical defense. I knew they were talking about it, but I did not know it was a matter of privilege. I did not pay it. My office lady called up the Secretary and asked what the dues were, and I sent check for that. I did not know we could have the defense. I know it now, and I have known it for a while, but I did not at the time I paid my dues. I think a little discussion, a little information among the members of the societies, would inform the members. It seems to me that \$1.00 for insurance is very small, that is, for defense. I do not see how anyone who pursues the practice of medicine in the present status of the medical profession with regard to damage suits can afford to be without such insurance. Damage suits come up just about like the lightning strikes—it strikes when you are not looking, when you are not thinking about it, and they worry you. I have been sued several times—in connection, however, with corporations. I was just used as a buffer to hold the cases in the state courts, but they

make you uncomfortable even then. This has been a matter of ignorance on the part of some of us in not taking advantage of this medical defense.

Dr. Broyles: Mr. President and gentlemen: This is a very important matter. I believe it deserves the most careful consideration. I believe in it. And yet we are all at sea this morning, and it is taking up the time of the whole House. I want to move that you appoint a committee of five to work out the details of this thing thoroughly, and that the Committee on Medical Defense be three members of the new committee, and that they report to this body in the morning at eight o'clock. Then we can adopt and discuss the report of that committee. We will have a nucleus around which to gather, and I believe we will save time, and also get a better result.

Dr. Malone: I second that motion.

Dr. Crook: The committee has asked advice. The committee feels like it wants to do just exactly what the State Medical Society wants done. It does not want to be arbitrary in its rulings, in its notes to members, and in its reports. Now we have considered this thing, and tomorrow our time will be more limited. The time is gone, and then we have more committee reports to hear, and the committee would like to get all the light possible. Several of the members have something they would like to say, and the committee would like to hear it.

Dr. Broyles: Dr. Crook, with the consent of the doctor, I would say report then, this afternoon. I did not mean any special delay. I believe that committee ought to get to work this morning and report this afternoon. I believe that would be better, for it to be able to make a good and full report, and work it out thoroughly. This is one of the most important things we will have before us this session, and I think this committee has made an excellent report, but the addition of two members would infuse new enthusiasm and probably new ideas in it, and I think they would work out a plan, a good working plan. My personal view would be to increase this and make it an amount that would give us what we need, by the men that do the paying, or to make it compulsory, which

I fear will drive members away. But the matter should be put in a shape that will give us the funds that this society needs for a perfect and reliable medical defense.

President: There is a motion before the house.

Dr. Tigert: We want to discuss this motion, that is what we are about. I raise the point of order that Dr. Broyles was entirely out of order. We were discussing whether or not we would accept the committee's report, and that motion is another matter.

President: We were discussing it without a motion. We will now bring it up in proper form. The question is to submit to the committee. All in favor of this committee make it known. The question is open for discussion.

Dr. Tigert: Mr. Chairman, I, of course, would be delighted to serve on this committee. I am already a member of the Medical Defense Committee, and I will be glad to serve on any other committee of which this committee is a part, but I feel that that committee would be in exactly the same position, no matter how long they deliberate, that we are in right now. In other words, this matter is well defined. The issue now is as simple as it will ever be in the world. We are on record here as making this matter obligatory on all members. As a matter of fact, we have not had the nerve to do it. Now we have either got to do it, or we must decide that we will allow the matter to be optional, and it is perfectly obvious to me that it cannot be carried out unless it is made obligatory on all of us. It is just up to this House of Delegates to decide that one question, and when that question is decided, the whole question is decided that determines whether we shall have medical defense at all or not, because, as our Chairman has indicated, it will not be possible to carry out this defense unless every member participates in it.

I will say this, that as long as the dues or premiums for this medical defense is made separate and apart from the regular dues, you will never be able to collect it all, and if it is to be made compulsory and every member is to participate in it, then it should be added to his dues, and his dues should not be accepted unless accompanied by this dollar. In that

way a man, to remain in good standing, will be compelled to pay that dollar. Then there is the question as to whether this will injure the membership of our society to a greater extent than it will help. I, for one, want the matter placed in the hands of the House of Delegates, where it originated, and where it belongs.

Dr. Brandau: I want to suggest that the entire House of Delegates, as a Committee of the Whole, pass a resolution about like this: "Resolved, That it is the sense of the House of Delegates of the State Medical Society of Tennessee that one dollar for the Medical Defense fund is a part of the annual dues of each member of the Society, and that each member who has not already done so be respectfully urged to pay the amount to the County Secretary of each Society." Motion seconded.

Dr. Tigert: There is a point of order before the House, that Dr. Broyles was out of order in making his motion.

I move that Dr. Broyles' motion go to the table.

Dr. Malone: I second it.

President: We will have to dispose of Dr. Broyles' motion first, and there is a motion before the House to table that motion.

Motion carried, and motion of Dr. Broyles tabled.

Dr. McSwain: I want to move an amendment to this last motion.

President: The motion is not up yet. I do not know if there has been a second.

Dr. McSwain: It was seconded.

President: The motion of Dr. Brandau will bring the matter in proper form before the House of Delegates. Dr. Brandau, will you please repeat that motion?

Dr. Brandau: Be it resolved, that it is the sense of the House of Delegates that \$1.00 for the Medical Defense fund is a part of the annual dues for each member of the State Society, and that each member who has not already done so be respectfully urged to pay the amount to the County Secretary.

Dr. McSwain: This will make a solution of all the difficulties, and will obviate objections on the part of some men who live in the country like I do. Instead of leaving it to the individual member, or else making it compulsory, just raise the dues of the Association to

\$3.00, with the distinct understanding that \$1.00 of the dues is to pay for medical defense. I move that the dues of themembers of this State Association be raised to \$3.00.

President: Dr. McSwain, is that an amendment to his motion?

Dr. McSwain: That will make a solution of all the difficulty, and you will not have any trouble at all.

Dr. Broyles: I second that.

Dr. Brandau: I accept the amendment as offered by Dr. McSwain.

A. Delegate: I rise to a point of order. We have a by-law regulating this. That cannot be acted upon in this meeting. That is an amendment to our by-laws, and consequently cannot be acted upon at this meeting.

Dr. McSwain: While that is correct, I insist that it is the solution of the whole difficulty.

Dr. Tigert: He does not move that we change our fees to \$3.00. He resolves that we shall do that. I think that is in order.

Dr. Crook: I suggest that we pass the motion of Dr. Brandau to take care of the past due obligations, which will do so without in any sense coming in conflict with our by-laws, and then we will take Dr. McSwain's, which will lie over one year, and get us out of all our difficulties in the future.

Dr. Sheddan: As I understand Dr. Brandau's motion, it does not say that this shall be compulsory. It does not make it any more definite than it is right now. He says it shall be insisted upon, that they shall be urged. That does not relieve the situation a particle. Consequently, we have got to take some more definite action than that. That won't relieve the situation at once.

I have had some experience with county medical societies. I have been Secretary and Treasurer, and I know just how hard it is to collect, and just so sure as you make this compulsory, without adding it to the dues, you will drive a great many members out of the society. While I believe it is a good move, I think it should be incorporated in our state dues, and made a part of our state dues, and that is the only way we will ever be able to collect it. If you leave it optional, they will not pay it, a great many will not,

and the only way is to either increase it and make it \$3.00, or just simply wipe the whole thing out, because I know good and well in our Knox County Medical Society there are twenty-five or thirty men who will drop out of this Association rather than pay the extra dollar. I hate to say that about a county like Knox, but I think there are a great many men there who will not pay it. In fact, I have solicited some men to join our society, and they have objected because the dues are already in our society \$5.00. Adding another dollar to it will not help. I do not think this resolution settles the thing at all. I do not think it simplifies the thing at all. I think it would be better to adopt the motion made by Dr. McSwain, and let it lie over to the next meeting.

Dr. Dulaney: I want to say, gentlemen, that this matter has been referred to the county medical societies. I had the pleasure, when I was President of the society, to establish this committee, and they reported to the Memphis meeting, and the majority of the medical societies of the state endorsed this defense movement. You can collect this dollar as you see fit. This committee was merely at this time working the thing in the way that would not antagonize anybody, and not make it compulsory, but the State Medical Society and the House of Delegates have the right to make it compulsory. It has already been referred to the county medical societies and voted on and taken up at the Memphis meeting. I know this to be a fact. It was referred to the majority of the societies over the state, and the report made in Memphis, and I think Dr. McSwain's and Dr. Brandau's motion is entirely in order. We have a right to put the two together as we see fit; as it was before, the committee itself was to collect this money, and it was not obligatory on the majority of the members.

Dr. Miller: So far as the constitutional part of this is concerned, we do not have to change the constitution. The constitution says that the assessment shall be equal. Now the by-laws say it is \$2.00 per capita. By introducing a resolution here in writing they can be made \$3.00 just as well as \$2.00. That will eliminate a lot of members from the Ten-

nessee State Medical Society, but it will not eliminate the best members. The best members will go ahead and pay it just the same, and the large majority will.

Now let us ask this question: What effect will that have on the workings of the committee? A man will have to be protected from the first of the year. If they would make it so that the report would be made to the Chairman of the committee or to the State Secretary, and he would make a careful record of it at the beginning of the year, that would be all right, but if they do as lots of them do, run to the end of the year, you would not know what you are protecting, you would not know what you are up against. We have \$604.00, with \$400 expended, or at least contracted for, and we do not know how many suits we will have, nor will we know until the end of the year 1916. For an act that Dr. Crook, or another member of the committee, Dr. Tigert, or myself would commit on December 31, 1915, according to the laws of this state the people would have one year, which would be the end of 1916, to bring suit. That would come in under the head of this expense. If a minor suit could be brought after he was twenty-one years old. There are members in here that have been discussing this thing that have not paid their dollar. That is not a question of inability, because they can. It is an oversight, or because they have just been inattentive or indifferent, and did not care whether they had it or did not have it. Dr. Fox, from Dr. Woodyard's county, at the meeting in Memphis, said, "Doctor, leave this matter open. Let us have it. Don't force us. I can't do anything with our men that way, but if you will leave it open I believe I can manage them." Dr. Fox is the only man that has paid in his county, and he said in a letter to me recently, "I have done my best to get our men to adopt it, but they won't." They are good men—don't you throw any reflection, I would not do it—but they will not accept it.

The men who want this, and who are progressive, are able to pay it if it is \$50, and they do not object. It is the man away back yonder at home that is opposed to this, and going to fight it, and it is a question whether we want to be progressive and pay it without

them, and allow them to come in on the band wagon if they want it.

Up at Jellico—I can't get a report from the Secretary of the society, I don't know whether they have any or not—I have written two or three letters asking for Council report, I have sent him a sheet to make it out on, an envelope stamped and addressed, and still I could not get anything out of him—he may be dead—

Secretary: No, he is not killed, Doctor.

Dr. Miller: I have always got a report from him before. I have known him personally, but he just don't want to report to the Council because he just thought he would have to write two or three more lines. Sometimes a fellow will do something and get a man to report to the Secretary, but I could not get any report from him. Now if these men do not turn in their reports we do not know what we are protecting, even if we go ahead and take this step. We must devise some way by which the day of payment is recorded, by which we can do that. The law was clearly written—all men who were in good standing with their county society and with the state society are entitled to pay this must be able to see who is in good standing.

Dr. Milligan: Dr. Miller is exactly right about that, and he has put forth a great deal of effort and tried to get this insurance for the State Medical Society, and I think the reason we have not had this paid is because the medical societies in the different counties have not entirely understood it. It seems to me that there ought to be a campaign of education of the members by this House of Delegates in their home societies.

Now our medical society did not understand that this was compulsory, or I do not think there is a man in it but what would have paid his dollar. And it is more than mere protection—it is more protection than we know, because when the medical fraternity of this state understands that the Tennessee Medical Society is behind a malpractice suit, there will not be half as many of them brought. When you have to stand alone and defend a malpractice suit without any one back of you it is a hard job, but when you have a lawyer against you who wants to

practice some chicanery and get himself aired, if he knows he is going to fight the Tennessee Medical Society he is not going to take a suit half so quick. Now if we will go home and explain all this to our medical societies of our counties that this is compulsory, and explain the benefits that will be derived by paying this dollar, I think a man who is a physician, and has any push or enterprise, ought to be glad to come up and pay it, and I think he will if he is the right kind.

Dr. Brandau: Did you say that the amendment to take effect now would apply to the incoming year, or the resolutions which I offered?

Secretary: Lie over one day and be adopted.

Dr. Miller: Must be made in writing and lay over one day.

Dr. Baxter: I am here representing my county medical society, and I believe that I understand the feeling of my society relative to this matter possibly better than any one else here. We have had this legal fund up before the county medical society, we have discussed it, we have talked and talked on it, and it was the sense of that society to allow the men the privilege to take advantage or leave it alone.

Now with reference to this \$3.00, making our fees \$3.00, instead of \$2.00. That looks very much to me like whipping the devil around the stump. Now when I go back home my society will say to me, "Why was it that this \$2.00 was raised to \$3.00? Why did they make that increase?" What am I to tell those people? Why, in order to meet this legal fund they are making it. Well, we had just as well have it compulsory, and be done with it, as to whip the devil around the stump. I believe, if we are going to make it compulsory, let's make it compulsory, and don't take advantage of those fellows lying back yonder in the stocks, and say we just raised your dues one dollar. Conscientiously, I must report to my medical society why this extra dollar is put on it, that this is true, and whenever this is done we will have trouble in our county medical society. It has been on a drag for a few years, but for the last few months it has grown, and we have a number of new men, men who are promising, and

are going to make useful men in the society, but this will put a stop to all of that, I am afraid.

Dr. Vance, of Bristol: While, personally, I do not disapprove of this measure, I know full well what it means up in our end of the state.

Dr. West: It means the same thing in the other end.

Dr. Vance: If I understand the situation now, it will be necessary for the Secretary of our local society to ask each member who has not already taken advantage of this insurance to pay another dollar for the current year, and as Dr. Baxter well said, you may think you can fool these country physicians, but you can't do it. Whenever you let them understand the motive underlying the increase in these annual dues, or assessment, you are going to find, I am afraid, considerable opposition, and you are going, furthermore, to find quite a drop in our membership, and I believe it is a matter we ought to deliberate over very carefully before final action is taken.

Dr. Tigert: Has the resolution been submitted in writing?

Secretary: Yes, sir.

Dr. Tigert: That being the case, it has to lie over until tomorrow, and this whole body of delegates now can constitute itself a committee of the whole to deliberate over the matter until in the morning, and I move you that this matter be held over and not acted upon, the discussion closed, and held over until tomorrow morning at 8 o'clock.

Seconded.

Secretary: Will you allow me to make a statement to the effect that we have now about 1,200, maybe a few over 1,200, paid members for the year 1915, which, by the way, is the largest that has ever been paid at this time. Dr. Woodyard comes from Greene County, one of the best counties in the state, his county has not reported; and Dr. Edwards tells me their dues are paid, and the Secretary has not reported. I am giving you this so that you will have some basis to figure out probabilities on.

Dr. Crook: This resolution could not be made to go back and take care of the past

year—that only refers to the future, that is not retro-active, is it?

Secretary: You cannot make anything retro-active.

President: The question is before the House for action. All in favor of this motion, as it has been read and seconded by Dr. Tigert, make it known by saying "Aye," opposed "No." That motion, you understand, is to defer the further consideration of this until the morning. That was Dr. Tigert's motion.

Motion carried.

A Delegate: Move we adjourn to 2 o'clock, it is 9:30 now.

Dr. Miller: Before we adjourn, as special order, this afternoon at 2 o'clock, Dr. Billing's and Dr. Rosenow's papers are set, and 2 o'clock is the time set for this house to meet, I would like for us to discuss and fix some time that will not conflict with that.

Adjourned, to meet at 2 p. m.

Wednesday Afternoon, April 14, 1915.

The House of Delegates met at 2 p. m., and was called to order by the President.

Moved, by Dr. Duncan Eve, that the House of Delegates adjourn until 4 o'clock.

Seconded and carried.

Called to order by President Miller at 4 p. m.

Dr. Malone introduced the following resolution:

Whereas a law creating a State Board of Preliminary Examination has been passed and approved by the Governor and, whereas, it is necessary for the newly created board to organize, so as to cooperate with the State Board of Medical Examiners in the appointment of a definite date for the next examination of applicants for licensure; be it

Resolved, That the Tennessee State Medical Association hereby urges the Governor to appoint at his earliest convenience the members of the "State Board of Preliminary Examination."

Dr. Eve moved to table the resolution, but withdrew the resolution to allow some discussion.

Dr. McCabe stated that he thought the resolution timely, and saw no objection to it.

Dr. DeLoach stated that the resolution was intended to clear up the situation.

Dr. Reagor thought the matter out of order.

Dr. McCabe thought it important to impress the Governor with the urgency of the situation.

Dr. S. M. Miller thought that the Board of Examiners and schools should inform the Governor of the urgency.

Dr. Eve renewed the motion to table, which was seconded and carried.

The report of the Committee on Conservation of Vision was submitted by Dr. E. C. Ellett, of Memphis, as follows:

Mr. President and Gentlemen: Your committee beg to report that the committeeman in each county is furnished with a box of lantern slides and some charts, such as are used in testing the eyes of children in school, and some literature on the subject, giving him a sort of synopsis of what he might cover in his lecture.

By correspondence which I have had with the Secretaries of the different county societies, I have succeeded in the last twelve months in having seventeen lectures delivered in the state. I have an appointment for another one myself on Saturday, and another one the following Tuesday, which are so close at hand that I think they might almost be counted in this report. The gentlemen who were kind enough to deliver these lectures were Dr. Richards at Sparta, Dr. C. H. Davis at Knoxville, Dr. C. J. Broyles at Johnson City, Dr. J. H. McSwain at Paris, Dr. A. B. Dancey at Jackson, Dr. Dancey at Bolivar, Dr. Lockhart at Coalmont, Dr. Gant and Dr. Wilkes at Columbia, Dr. Reagor at Shelbyville, Dr. Dotson at Lebanon, Dr. Cullom at Nashville, Dr. Fontaine Moore at Dyersburg, and I have myself given it twice in Memphis.

The lecture is given to a lay audience, and we feel that some organization something like the Parent-Teachers' Association is a very good body to bring it up before, as they are very much interested in it, and I want to say that every one who has delivered this lecture has been perfectly surprised at the amount of interest that the people have manifested in the subject. Whereas many of the men have gone into the thing with diffidence and fear that they would not excite any interest in it at all, almost without exception they have reported that the matter turned out to be of great interest to the people, so much so that

a number of the men have requested appliances, slides, etc., that they might repeat the lecture, in some instances, in some of the neighboring towns. I am glad to report encouragingly about it. I think it is a great work, and that it will do a great deal of good.

I would like to say that of course these lectures are given so that there can be no criticism of them in the way of boosting the individual, or boosting the medical profession. There is nothing in it about treatment, but it is mainly along the line of prevention. There is a good deal about school inspection, showing how these tests can be made, how readily they can be made with the charts by an untrained person of ordinary intelligence, like the teacher, for instance. We also stress the object of the report to be sent to the parent, calling attention to some defect in the child, and suggesting that they see their family physician.

Then we go a little further, and take up ophthalmia and give them some idea of the cause, and the simplicity of the preventive measures.

Other things taken up are the lighting of the school rooms, with pictures to show the arrangement of desks with regard to the sources of light; the arrangement of the chairs and desks with regard to securing the proper position of the child at the desks, and then the lighting arrangements in regard to certain occupations, such as proof-reading, type-setting, and other things that involve a great deal of use of the eyes. Then the question of industrial accidents, and the protection from them, both in the way of appliances, such as heavy glasses, and smoked glasses to protect from the glare of furnaces and from particles that fly from emery wheels, etc.; and then the prevention of various contagious diseases through the means of the roller towel and wash basins that are used in common, and things of that sort.

The only disease besides ophthalmia neonatorum that we go into at all is trachoma—unless you speak of near-sightedness as a disease, which it really is, but we have tried to avoid anything that might be a source of criticism.

There is no advice given to consult oculists in preference to opticians, and no advice giv-

en to consult oculists at all, for that matter, and nothing at all about the treatment of any of these conditions, but merely a question of the prevention of actual diseases.

If it is agreeable to the society this work will be continued in the same manner as heretofore.

REPORT OF COMMITTEE ON CONSERVATION OF VISION FOR THE YEAR 1914.

Cities in which lectures have been given, name and address of lecturer:

Sparta Tenn., February 24, 1914; Dr. A. F. Richards, Sparta, Tenn.; size of audience estimated, 300; expenses estimated \$5.00; expense borne by Dr. A. F. Richards; marked interest shown.

Jefferson City, March 5, 1914; Dr. C. H. Davis, Knoxville; size of audience estimated, 400; expenses estimated, \$1.70; expenses borne by Dr. B. M. Tittsworth; considerable interest shown; probable results, establishment of school inspection, etc.

Jonesboro, March 9, 1914; Dr. C. J. Broyles, Johnson City; size of audience estimated 100; expenses estimated, \$2.00; expenses borne by Dr. R. W. Dulaney.

Paris, Tenn., March 16, 1914; Dr. J. H. McSwain, Paris, Tenn.; size of audience estimated, 125; expenses estimated, \$1.50; expenses borne by M. E. Church, South; very decided interest shown; probable results, as establishment of school inspection, etc.

Martin, Tenn., March 20, 1914; Dr. R. M. Little, Martin, Tenn.; size of audience estimated, 15; expenses estimated, \$1.90; expenses borne by Dr. R. M. Little; interest shown very great.

Bolivar, Tenn., April 2, 1914; Dr. A. B. Dancy, Jackson, Tenn.; size of audience estimated, 250; expenses estimated, \$1.80; expenses borne by Drs. Tate and Dancy; marked interest shown; small town, but probable inspection.

Jackson, Tenn., April 3, 1914; A. B. Dancy, M.D., Jackson, Tenn.; size of audience estimated, 100; expenses borne by Woman's Club; much interest among teachers; committee appointed.

Coalmont, Tenn., April 4, 1914; Hy Lockhart, M.D., Coalmont, Tenn.; size of audience estimated, 50; expenses estimated, \$6.00; expenses borne by Dr. H. Lockhardt; fair interest shown; probable inspection, none.

Knoxville, Tenn., April 9, 1914; Dr. C. M. Capps, Knoxville, Tenn.; size of audience estimated, 200; much interest shown; probable inspection.

Columbia, Tenn., April 22, 1914; Drs. H. A. Gaut and J. W. Wilkes; size of audience estimated, 75; expenses estimated, \$7.64; expenses borne by Maury County Medical Society; marked interest shown.

Chattanooga, Tenn., April, 1914; Dr. J. McHogshead; size of audience estimated, 45; marked interest shown; improved character of school inspection.

Memphis, Tenn., October 5, 1914; E. C. Ellett, M.D., Memphis, Tenn.; size of audience estimated, 10; expenses borne by Dr. E. C. Ellett; keen interest shown.

Shelbyville, Tenn., February 12, 1915; Dr. F. B. Reagor, Shelbyville, Tenn.; size of audience estimated, 350; expenses estimated, \$1.00; expenses borne by Dr. F. B. Reagor; good interest shown; nothing said about inspection.

Lebanon, Tenn., February 9, 1915; Dr. Walter Dotson, Lebanon, Tenn.; large audience; expenses estimated, \$10; expenses borne by Wilson County Medical Society; good interest shown.

Memphis, Tenn., March 15, 1915; E. C. Ellett, M.D., Memphis, Tenn.; size of audience estimated, 50 nurses from three hospitals; expenses estimated, \$1.50; expenses borne by Dr. E. C. Ellett; good interest shown; Memphis has school inspection.

Nashville, Tenn., March 25, 1915; M. M. Cullom, M.D., Nashville, Tenn.; size of audience estimated 100; expenses borne by Y. W. C. A.; marked interest shown; Nashville has school inspection.

Dyersburg, Tenn., April 1, 1915; Dr. Fontaine Moore, Memphis, Tenn.; size of audience estimated, Dr. F. B. Moore; interest very good; members of Woman's Club and teachers promise co-operation.

Dr. Savage: I move the adoption of the report and the continuance of the committee.

Seconded and carried.

Dr. Savage: In connection with that work, I have an amendment to the by-laws that I want to offer, to lay over until tomorrow, to amend Chapter 1 of the By-laws by adding Section 5 as follows:

"Section 5. The Section of Eye, Ear, Throat and Nose may be formed, which may hold a separate session at some time of the annual meeting for the discussion of such technical questions as would be profitless in the general session, all other papers pertaining to these organs to be on the general program.

"The officers shall be Chairman, Vice Chairman and Secretary of the Section, and they shall be elected by its members."

I offer this after a called meeting of the Ear, Eye, Throat and Nose men this morning. All of them were heartily in favor of making this amendment to the constitution. I will state that probably the only session we would have would be on Monday evening before the meeting of the general Association. That, of course, will remain over until later.

President: Pass the resolution in to the Secretary, and it will take the usual course.

We will now have the report of the representative to the National Legislative Council, Dr. S. R. Miller.

Dr. S. R. Miller: I got a notice from the Secretary of that body about four days before the time of the meeting, and as I had some engagements that could not be postponed, I could not leave for that meeting. I secured data from the Secretary, and others, such as I could on short notice, and in view of the fact that I had been notified that verbal reports could not be made to that meeting, that all reports should be made in writing, I sent report of about two pages in to the meeting of the work of this body. I did not have any definite legislation to send in, that is any definite action that had been taken, because no legislation was accomplished during the last part of the last legislature before this, and nothing had been made a law up to that time in the present legislature. I could only report what I understood was trying to be done, so that all the report did not amount to very much.

Moved, seconded and carried, that the report be received.

President: We will now have report of the delegates to the A. M. A.

Secretary: Dr. Bromberg and Dr. Ellett were the delegates and neither one of them is here at the present time.

President: We will have to hold that over. We will have the report of the Board of Trustees.

Secretary: The Chairman of the Board of Trustees and the Board are here, but they have not found it convenient to have a meeting as yet. Their report will be made before the adjournment.

President: This report will be called for again. We will have the report of the Councilors—this will be called by districts.

Secretary: First District, Dr. C. P. Fox.

Dr. Richards: Mr. President, the Councilors are not all present, and it was undertaken to get up a report of the entire state, prior to the meeting of the Association. I was elected Chairman of the Board of Councilors at the last meeting in Memphis, so I went to work last December and made an effort to get a report from the different districts, and

get it compiled so that it could be made here at this meeting.

President: Without having to be called by districts?

Dr. Richards: Yes, sir; unless there was some detail that the Councilors for the different districts wanted to give. I have succeeded in getting all of the Councilor's reports except about three, and I have it so condensed that I think it could be made without taking very much time. However, I want to say with regard to the failure of this report being complete, the responsibility rests mainly with the Secretaries of the county societies. The Councilors have worked pretty faithfully this year, better than ever before, and tried to get up a detailed report of the condition of the profession in each district. Their failure, where there has been a failure, on the part of those who have reported, rests with the Secretaries of the individual counties. Then there are two or three of the Councilors, two or three, I believe—that have not reported at all.

Now as to the First District, I have a letter from Dr. Fox in regard to his report that I suppose might be read as his report, and if you say so, I will read that as the report of the First Congressional District.

President: I think that is proper.

Dr. Cox: I want to suggest that as the Councilors have made their report to Dr. Richards, Chairman, as you call each Councilor, let Dr. Richards report therefor.

President: I think that will be a good plan.

Dr. Richards: For the First District, Dr. Fox writes: "I regret that I have not been able to comply with your request in making a report for the First District at an early date, and that I am now unable to make a full and satisfactory report, but in defense of myself will say that in December I got a list from the Secretary of the State Association of all the doctors in the First District, and I wrote a letter to each one, urging the importance of organization, and offering my services, if I could be of any assistance. To these letters I possibly had a half dozen replies. I have written to each Secretary of the organized counties in this district, and have received a report from Greene, Cocke

and Sullivan. I am enclosing this report. I regret that I have not been able to do more, but it is impossible to enforce an interest in societies in this district.

"I regret exceedingly that I will be unable to attend the state meeting this year, but a most important personal engagement will prevent. Greene county, as you will see, comes up with her usual number of members, and has now an active, interested membership."

President: Second District.

Dr. Richards: That is all he says. He does not give the number in his district, except he reports 47 members in the societies in that congressional district.

Now the Second District is reported by Dr. Miller, and is the most elaborate and best report that I got. In that he reports 193 members of the Association in the Second District. He reports 148 physicians in the district. I suppose that is just a mistake in not entering it all up. There are more physicians than members, but you did not get it down that way, Dr. Miller. Do you know what the full number of physicians would be in your district?

Dr. Miller: It is shown in the report, you have it there.

Dr. Richards: Suppose you read this report, as you are more familiar with it.

Dr. Miller: There are 193 members, and there are 148 physicians in the district who are eligible. There are 106 non-eligible members in the district. That includes homeopaths, irregulars, or unknown quantities; and we had 23 new members added to the list; none dropped for non-payment of dues or otherwise. We had six transferred to other counties. We had 96 society meetings, with an average attendance of 72 all told, as he started out with the figures, and 82 papers read. One hundred and six men paid medical defense. I did not intend these figures to be read. These figures were added up there with a pencil, just for my own information. I thought that the Chairman might call for them. These are all made up from different counties in the state. Only one county is unorganized. One other county, Scott, has not had a meeting during the year,

but several letters have brought about a statement from them that they have had several dates for meeting, but have been unable to do so. You will understand this is a county without any railroads in it, and about eight or ten physicians, good, bad and indifferent, in the county.

Some of the counties have done most excellent work. In Hamilton County I think there has been quite an improvement. In Knox County there has been an improvement in membership, and a great improvement in interest. Blount County has not been able to do very much. Roane County has done very good work, and has done especially good work on the question of the "Indian doctor." They have been very active, and I think their delegate here will ask some financial aid of this body, as they have had considerable expense fighting that thing through, after the State Board of Examiners and the Attorney General had failed to accomplish anything. These men were determined to have something done. I have had numerous conferences with them, and they have gone out in a determined way, and now have a permanent injunction against this "Indian doctor," which the men there believe is nothing more nor less than a negro quack of the most ignorant and worst type.

President: He is the gentleman whom I complimented last night. We will now have the Third District.

Dr. Richards: The Third District is the district of which I am Councilor. That district has 256 doctors in the counties reported from, 191 members in the counties reported from, 87 meetings in the counties reported from. Attendance, 70. Number of scientific papers read, 106. Number of visits of the Councilor one, except his home county. That is the total report of the Third District. I will not give it in counties, because it is all down, and would be too long to read.

The Fourth District, Dr. Dotson's county, shows 198 physicians in his district in the counties reported from, 102 members of the Association in the counties reported from, non-eligible doctors, 70 in the counties reported from. Number of society meetings 74, average attendance 56, number of scientific papers read 62, number of visits of Councilor

10, number of letters written by Councilor 499.

The Fifth District, which Dr. Reagor reports, in his district 103 physicians in the counties reported from, 67 in the societies, non-eligible 28 in the counties reported from, number of society meetings 23, attendance 27, number of scientific papers 51, number of visits of Councilor 2.

Dr. Gallagher is the Councilor for the Sixth District, and I got no report from him.

Dr. Wheat in the Councilor for the Seventh District, and I had a letter from him in which he said he had written all the Secretaries of the societies in his district, and had received no reply, but was willing to do anything we would suggest.

Dr. Dulaney, in the Eighth, reports 182 physicians in the district from the counties reported, 114 members, 71 non-eligible men, 49 meetings, 51 in attendance, 71 scientific papers, and no visits by the Councilor.

The Ninth District, by Dr. Wingo, reports 138 men in the four counties reported from, 81 membership, 32 non-eligible, 28 in attendance, 28 scientific papers, and 12 visits from the Councilor—I suppose that was his own county.

I total that all up in columns here that the Secretary may be able to make record of it, and it is arranged so that it will be easily understood.

I want to say that the Councilors have done better work this year than ever before.

REPORT OF COUNCILORS.

FIRST DISTRICT.

Dr. A. F. Richards, Chairman of the Board of Councilors, Sparta, Tenn.

Dear Doctor:

I regret I have not been able to comply with your request in making a report for the First District at an earlier date, and that I am now unable to make a full and satisfactory report, but in defense of myself will say that in December I got a list from the Secretary of the State Association of all the doctors in the First District and I wrote a letter to each one, urging the importance of organization and proffering my services if I could be of any assistance. To these letters I got possibly half dozen replies.

I have written to each Secretary of the organized counties in this district and have received the report from Green, Cocke, and Sullivan. I am enclosing their reports.

I regret that I have been unable to do more, but it is impossible to enforce an interest in Societies in this district.

I regret exceedingly that I will be unable to attend the state meeting this year, but a most important professional engagement will prevent.

Greene County, as you will see, comes up with her usual number of members and has now an active and interested membership.

Wishing you a pleasant and successful meeting at Nashville, I am

Yours cordially,

C. P. FOX.

SECOND COUNCILOR DISTRICT.

Counties	Number in Society	Physicians in County	Eligible Non-Members	New Members	Dropped
Anderson -----	12	20	8	3	0
Blount -----	8	24	15	2	0
Campbell -----	--	--	--	--	--
Hamblen -----	14	20	15	2	--
Jefferson -----	20	26	6	1	--
Loudon -----	9	16	7	0	--
Knox -----	108	--	35	9	--
Roane -----	14	30	14	0	--
Scott -----	8	12	6	4	--
Union—Unorganized.					
Total -----	193	148	106	23	0

Counties	No. Society Meetings	Attendance	No. Scientific Papers	No. Paid Medical Defense to April 10
Anderson -----	5	4	8	13
Blount -----	4	7	4	2
Campbell -----	—	—	—	1
Hamblen -----	12	9	12	9
Jefferson -----	4	10	4	13
Loudon -----	10	5 each	2	1
Knox (transferred 6) --	49	28	44	57
Roane -----	8	9	8	10
Scott -----	—	—	—	—
Union—Unorganized.	—	—	—	—
Total -----	96	72	82	106

THIRD COUNCILOR DISTRICT.

[illegible]

	Grundy	9	8	1	11	5	8	9
	Hamilton	175	139	30	50	40	70	0
No.	James	--	--	--	--	--	--	--
No.	Marian	--	--	--	--	--	--	--
	McMinn	--	--	--	--	--	--	--
No.	Meigs	--	--	--	--	--	--	--
	Monroe	15	10	5	4	8	12	0
	Polk	15	8	4	7	5	2	0
No.	Sequatchie	--	--	--	--	--	--	--
	Warren	23	10	8	8	8	2	1
	White	19	16	3	12	9 2-3	12	12
	Total	256	191	51	87	70	106	13

FOURTH COUNCILOR DISTRICT.

Counties	Physicians in County	Number in Society	Eligible Non-Members	No. Society Meetings	Attendance	No. Scientific Papers	No. Visits of Councilors
Clay -----Unorganized	--	--	--	--	--	--	--
Cumberland -----9	5	2	12	4	10	0	
Fentress -----Unorganized	--	--	--	--	--	--	--
Jackson -----No Response	--	--	--	--	--	--	--
Macon -----16	10	2	10	6	12	0	
Morgan -----No Response	--	--	--	--	--	--	--
Overton -----14	8	4	12	6	2	0	
Pickett -----Unorganized	--	--	--	--	--	--	--
Putnam -----28	18	6	11	8	6	0	
Rhea -----20	10	10	4	--	--	0	
Smith -----30	18	10	12	10	21	1	
Sumner -----33	16	16	3	14	3	3	
Trousdale -----Unorganized	--	--	--	--	--	--	--
Wilson -----48	17	20	10	8	8	6	
Total -----198	102	70	4	56	62	10	

Number of letters written by Councilor, 499/

If any other later reports should (happen) come in to me, I will be delighted to send them in to you at once, and shall ever be ready, willing and anxious to serve you.

Fraternally yours,

WALTER S. DOTSON,

Lebanon, Tenn., February 22, 1915.

FIFTH COUNCILOR DISTRICT.

Counties	Physicians in County	Number in Society	Eligible Non-Members	No. Society Meetings	Attendance	No. Scientific Papers	No. Vists of Council
Bedford ----	35	20	7	12	12	12	1
Cannon—Not organized and can't get it to.							
Coffee -----	--	--	--	--	--	--	--
DeKalb—Not organized and can't get it to do so.							
Average							
Lincoln ----	42	25	17	11	10	15	1
Marshall ----	26	22	4		15		
Moore—Only three in this county and two of them are members of Lincoln County.							

Rutherford	--	--	--	--	--	--	--
Totals	103	67	28	23	27	51	2
F. B. REAGOR, Councilor.							

SEVENTH COUNCILOR DISTRICT.

Cornersville, February 5, 1915.
Dr. A. F. Richards, Sparta, Tenn.
Dear Doctor:
Yours of recent date to hand and in reply will say that I've written several doctors over my district, and up till now have received only one reply. No letters returned—it's somewhat discouraging. However, I will try them again and try to make a nice report. I've only visited my home county, as others have failed to write and give their meeting dates.
Fraternally,
L. E. WHEAT.
P. S.—Would like to have any suggestions that you can offer. W.

Counties	Physicians in County	Number in Society	Eligible Non-Members	No. Society Meetings	Attendance	No. Scientific Papers	No. Visits of Councilor
Dickson	--	--	--	--	1 per mo.	Several	--
Giles	38	34	1	12	70%	--	--
Hickman	--	--	--	--	--	--	--
Houston	--	--	--	--	--	--	--
Humphreys	--	--	--	--	--	--	--
Lawrence	--	--	--	--	--	--	--
Lewis	--	--	--	--	--	--	--
Maury	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--
Williamson	26	16	8	9	50%	9	1
Totals	--	--	--	--	--	--	--

EIGHTH COUNCIL DISTRICT.

Counties	Physicians in County	Number in Society	Eligible Non-Members	No. Society Meetings	Attendance	No. Scientific Papers	No. Visits of Councilor
Benton	16	0	16	0	0	0	0
Carroll	40	22	18	4	8 to 10	4	0
Chester	14	12	6	--	--	--	--
Decatur	No report	--	--	--	--	--	--
Hardin	No report	--	--	--	--	--	--
Henderson	26	24	2	12	12	24	0
Henry	No report	--	--	--	--	--	--
McNairy	27	16	9	11	10	25	0
Madison	59	30	20	22	20	18 Pres.	--
Perry	No report	--	--	--	--	--	--
Totals	182	114	71	49	51	71	0
A. B. DANCY, Councilor.							

NINTH COUNCILOR DISTRICT.

Counties	Physicians in County	Number in Society	Eligible Non-Members	No. Society Meetings	Attendance	No. Scientific Papers	No. Visits of Councilor
Crockett	18	12-18	7	monthly	*10	0	0
Dyer	--	--	--	--	**	**	0
Gibson	35	23	1	--	**	**	0
Haywood	--	--	--	--	--	--	--
Lake	--	--	--	--	--	--	--
Lauderdale	34	24	4	12	12-18	***	0
Obion	--	--	--	--	--	--	--
Weakley	51	20	30	12	12	28	12
Total	138	81	32	28	28	28	12
*10Average. **Not given. ***Don't know.							
J. T. WINGO, Councilor.							

RECAPITULATION.

Counties	Physicians in County	No. in Society	Eligible Non-Members	No. Society Meetings	Attendance	No. Scientific Papers	No. Visits of Councilor
First	--	47	--	--	--	--	--
Second	148	193	106	96	72	82	--
Third	256	191	51	87	70	101	1
Fourth	198	102	70	74	56	62	10
Fifth	103	67	28	23	27	51	2
Sixth	--	--	--	--	--	--	--
Seventh	--	--	--	--	--	--	--
Eighth	182	114	71	49	51	71	0
Ninth	138	81	32	28	28	28	12
Tenth	--	--	--	--	--	--	--

A. F. RICHARDS, Chairman.

President: The Tenth District?

Dr. Richards: Dr. Dickson is the Councilor from the Tenth District, and he has made no report.

Dr. McCabe: There are quite a number of men ineligible. What do you mean by ineligible?

Dr. Richards: I mean eligible non-members.

Dr. McCabe: I note you made two statements—one was eligible non-members, and the other was ineligible for membership.

Dr. Richards: In reading that column I might have misstated it, but the fact is every time it means eligible non-members.

Dr. McCabe: I thought perhaps you meant by that that they were probably quacks.

Dr. Wingo: In our district we have a man who is non-eligible simply for the reason that he is non-licensed by the state, and refuses to be licensed. He has been prosecuted, the Board has been after him, and everything else, but he gets by some way, in spite of us. We would take him in if he would be licensed, but he refuses to be. He is a good man, and we would be glad to have him.

A Delegate: Dr. McCabe's question is well taken, because if we subtract the number of members from the number in the county that are eligible, that includes the chiropractors, the homeopaths, the ones not licensed, and all the negro doctors—we have a good many of them through the state, and they are not eligible.

President: What disposition shall be made of this report?

Moved and seconded that it be received.

Dr. Richards: Dr. Gallagher has come in.

President: Dr. Gallagher, we are receiving the reports of the Councilors. We would like to have a report from the Sixth District.

Dr. Gallagher: There is not a great deal to report from the Sixth District. Cheatham County is hopeless. I do not see any prospect at all of ever being able to organize that county. Robertson has come into the fold again, you might say, and they are holding regular meetings, well attended.

Montgomery County is holding meetings occasionally, but with no great regularity, and it is beyond me to know what to do to stimulate any further enthusiasm there.

As for Davidson County, the attendance has been large, and the membership greater than ever before in the history of the organization, and I do not think it is necessary to do anything more there. All has been done to stimulate a continued interest, I might say, in the Nashville Academy of Medicine. They are doing good work, have regular weekly meetings, and regular enthusiastic meetings. Further than that I have nothing to report.

Dr. Richards: I want to suggest if this report is received now we can make a supplementary report before the Board of Councilors. Dr. Gallagher can reduce his report to writing.

President: We can receive this report and

hold it over until the supplementary report is introduced.

A Delegate: I would like to offer a suggestion, that we get up a list of the non-eligible men in the state that are practicing medicine, so we may know how many we have. In my county we have as many non-eligible men as eligible. We have a great many men practicing that are not licensed.

President: What disposition shall be made of this report of the Board of Councilors?

Moved, seconded and carried, that the report be left open until the supplementary report by the Councilors.

Secretary: I would like to make an announcement. Dr. Gallagher is not familiar with the fact, because it is a recent development, but Montgomery County has been regenerated, at least they threaten to be regenerated, and have made a more favorable report recently than they have for a number of years.

Dr. McCabe: I have a resolution referring to the term of the Secretary of the State Board of Medical Examiners, and to prosecuting persons who are practicing medicine illegally in the State of Tennessee.

Secretary: That comes under the head of new business, and is not now in order.

Dr. Brandau: Our State Secretary threatened to expose us for not having any meetings for such a long time, and we got alarmed and reorganized, and now we are having a meeting every two weeks.

President: Dr. Cowden, we have called for your report as Treasurer.

Dr. Cowden: I have a detailed report, and would like to submit my report to the committee to be examined into, and I believe all that is necessary before this body is to give a summary.

Without exception, this course was taken.

Dr. Cowden: The total amount received from advertising was \$2,455.66; total amount from members, \$2,868.00, making a grand total of \$5,141.66. I have \$1,639.00 in bank, and not a dollar of outstanding indebtedness, with a few more accounts to be collected. But I would like to submit my entire report to the committee.

A Delegate: Mr. Chairman, I move that

the report be received and submitted to the Auditing Committee.

Secretary: The first thing would be to appoint an Auditing Committee. The Auditing Committee is generally appointed and the reports of the Secretary and Treasurer referred to that committee.

Moved, seconded and carried that the reports of the Secretary and Treasurer be referred to the Auditing Committee.

President: We now come to the head of new business.

Secretary: There are a number of matters that are to be taken up under the head of new business, and I have some of them that are referred to in this report which you have already had in your hands—which, at any rate, has been published in the Journal, and placed here so that you could get a copy of it.

One matter which I think important to bring to the attention of this body is that touching upon the situation which has arisen from the organization of the new county society in Sullivan County. This county was organized in 1914, and is composed of a membership which has been recruited from three counties, Sullivan, Johnson and Carter. This was done duly under the provisions of our constitution. Sullivan County is a border county, and the principal city is immediately upon the state line between Tennessee and Virginia. Through the zeal of a few individuals in Bristol, and throughout the county, this new society was organized. There was considerable opposition to it of a nondescript sort, and a great deal of trouble arose from the fact that men who lived in Tennessee practiced in Virginia, men who lived in Virginia practiced in Tennessee, and that some men on each side of the line preferred membership in the society of Virginia, rather than in the Tennessee State Medical Association.

Further trouble was encountered because of the fact that some resident physicians of Sullivan County already belonged to other societies which had been longer established—for instance, the county society of Washington county, the county society of Knox county, or one or two others in that part of East Tennessee. Now, then, it seems that there is no disposition on the part of some of these

gentlemen living in Sullivan County to identify themselves with the duly organized society in their own county. The Medical Association of the state of Virginia has not been heretofore organized on the county unit plan, and the Virginia county immediately adjacent to Sullivan has no organization of any sort. As a consequence, the new society in Sullivan county is having a more or less stony road to travel. Something must be done positively, clearly, and without any sort of reserve, to clear up this situation. Our state constitution demands that a man shall belong to his own county association unless there is some good reason for his belonging to an adjacent society, and every county is the sole judge of its own membership, and is also the source from which permission must be obtained to join an adjacent county society. I think it is worth while for this matter to be considered and some reiteration made of the declaration of our constitution for the benefit of those gentlemen who are struggling, after many failures have been made in Sullivan county, to maintain the organization that they have perfected.

President: Before taking any action upon the matter that Dr. West has suggested, I want to announce the Auditing Committee: Dr. Savage, Dr. Sheddan, Dr. Malone.

Dr. Savage: Allow me to ask you to put McCabe or Tigert in my place. Either one of them has an abundance of time, especially McCabe, and he is good in figures.

President: Dr. McCabe, are you willing to relieve him?

Dr. Sheddan: I suggest that you put somebody else in my place from East Tennessee, as I expect to be out of the city in the morning.

President: Then we will make it Dr. McCabe, Dr. Miller and Dr. Malone.

Dr. Miller: I would like to ask you to appoint Dr. Zirkle in my place. With this medical defense business I will have my hands about full.

President: With the consent of the House of Delegates, I will make that substitution. I know how Dr. Miller is tied up, so I will substitute Dr. Zirkle.

Secretary: Now if Malone don't stick, everybody will think there is something

wrong with that report.

Dr. Malone: I will stick.

Secretary: This matter I have just called to your attention is one of far-reaching importance, as there are men all over the state joining societies in which they are not entitled to membership.

Dr. Vance: I do not know that I have anything to state, in addition to the statement made by Dr. West. He gives the facts in as few words as possible. For some reason it is right hard to keep them in. Some of the best men we have in the county there seem to be very much opposed to becoming affiliated with the State Society of Tennessee, notwithstanding they have lived in Tennessee all their lives. I do not know just what motive underlies it, but I have an idea. I asked Dr. West to not get me implicated in this matter. I didn't want to have anything to do with it, but I will state, throwing some light on the situation, so that you may understand the animus in the matter, about seven or eight years ago, when we had a county organization, the state society was displeased with the course they were pursuing in the matter, and disciplined them, and for that reason they withdrew and connected with the Virginia State Medical Society. My judgment is that it is just simply a matter or a feeling of animosity that is back of all of it.

Now, most of these men are friends of mine, and, as I said, some of the best physicians we had in that county are included, individuals who are throwing cold water upon the organization of a county medical society there. I regret it very much, and if we could pursue some course here now that will reclaim them, and put them in this organization, I shall personally be very glad of it. I assure you that you will be getting some very competent physicians into the State Medical Association.

Now there is another matter that Dr. West did not mention that will cut some figure up there. We have affiliated there or, rather, we have taken in some of the physicians who are residents of Bristol, Virginia, as affiliated members. They are the most enthusiastic members, by the way, that we have. Of course they retain their membership in the Virginia State Medical Association, and are just simply permitted to attend the meetings and par-

ticipate in the discussions. The question has presented itself up there, and is one which I would like to have some ruling on, if this body is competent to decide the matter, and that is, whether the location of a physician's office or his home determines his citizenship, so far as his connection with the medical society is concerned. I ask that question for the reason that we have some Virginia physicians there whose offices are in Tennessee, and we have some Tennessee physicians there whose offices are in Virginia.

President: You mean by that they reside on one side and have an office on the other?

Dr. Vance: That is it. Some vote in Tennessee, or have their office in Tennessee, and vice versa. The question is, where is a man's legal residence, where he votes, or where his office is. We have one physician there who is a native of Virginia who would be glad to become a member of the State Society of Tennessee. His office is in Tennessee, but I do not know how to settle that, and if these gentlemen will enlighten me, I will appreciate it.

President: So if you do anything wrong on one side, you can just step over to the other and be out of harm's way.

A Delegate: Mr. President, I will submit the question, are these gentlemen leading a double life? (Laughter.)

Dr. Vance: You have heard the symptoms, gentlemen. What is the remedy.

Dr. Reagor: Oh, give them the choice. That is done in several matters in Tennessee. If a man lives on the county line, or within a few feet of the county line, he is called a "liner," and they give him choice of voting in the different districts or different counties, at his own choice, let him make the choice, and then bind him to that. Really, the situation seems to have resolved itself to that point where we will have to consider these men "liners," and I offer that as a suggestion. When I was a boy, we used to have to work the road, and a fellow worked his where he had his washing done. Where does he vote, where is he registered. I think that would be the turning point in this matter, where his citizenship is. What state board of medical examiners is he under? He could not be under both Tennessee and Virginia. I

think we could determine that from his citizenship.

Dr. Sheddan: I know the same condition obtains in some of the border line counties of Kentucky—Muhlenberg and Cumberland. I know that takes some of our Tennessee men into the Kentucky State Medical Society, if it is more convenient for them to attend a society in Kentucky than in their own county. So it seems to me we are not a rock-ribbed, iron-bound, hide-bound political party, and we would like to have all of the good men in the Tennessee State Medical Society we can get. So I move you, Mr. President, that we give the Sullivan County Medical Society the privilege of incorporating, or taking in as members, all medical men along the border there who are more convenient than they would be to societies outside.

Secretary: That does not meet the point. We want everybody in that we can get, but we want a man to be responsible to some organization. We do not want a man in Sullivan County to hike over and join Knox county without saying anything.

Dr. Sheddan: We had as members of the Knox County Medical Society a few members of different counties throughout East Tennessee, but as soon as a county medical society is organized, we drop them from the roll, and tell them they will have to become members of their local society.

Dr. West: Exactly so, but the point is this: notwithstanding you drop them, in some instances they go to work to try to destroy an organization that is trying to be maintained on an honorable plane, so that they can go, then, and take membership where they please. In other words, I do not propose, if there is any way around it, to have the Sullivan County Medical Society choked to death, after Dr. Cowan and Dr. Vance and Dr. Delaney and a few others have succeeded in organizing a medical society in Sullivan county. They are entitled to our support from start to finish, and we ought not to sit quiescently by, unless Sullivan county is willing for them to do this. I take this county as a type of the proposition I put before you, and not specifically, because there are other societies where this thing goes on.

Dr. Milligan: I would like to know just

what the Medical Society can do with a man in Sullivan county. He has been licensed by the State Board to practice medicine in Sullivan county. Now if he sees fit to join the Sullivan County Society, or not to affiliate with the Sullivan County Society—I do not see that we can force him to join the Sullivan County Medical Society. In case he has a license to practice in Virginia, as well as Tennessee, if he sees fit to go over there I do not see how we can keep him from that. Of course we cannot drop him from the roll of this Association—he don't belong to it. Where else does our jurisdiction come in over these men? If there is any way we can have jurisdiction, I am heartily in favor of enforcing it, but I do not see where the place comes that we can do anything if every soul wants to join a medical society in Virginia. There may be some reason why they would rather be over in Virginia than in Tennessee, but I do not see where our jurisdiction over these men comes, and I would like to have the Secretary and President of this Association, or some one, tell us what to do.

Dr. Miller: I thought the question had been settled long ago by the Councilors. I thought the question at issue at Bristol was whether or not the members residing in the commonwealth of Tennessee could belong to the Virginia Association, and vice versa, and this matter, it seems to me, is a matter for the Council to formulate something and submit it to this body. The cases that Dr. West has referred to, Dr. Vance attending in Knox County and some other gentleman from Hawkins county, where they had no society, was done with the consent of the Councilors in those districts. I was one of them, and I would not agree to that until I consulted the Councilor in the First District, and after consulting with him, and finding that there was no society, I consented. Another case was a man in the Second District who wanted to join another county because he was on the highways where he could reach that county very much better, and I would not give my consent in that case until the society in the county in which he resided gave their consent that he join the other society, and I thought that was a general rule that was adopted, and I think this is a matter that ought to come

before the Councilors first, and perhaps they can submit something to this body they could approve, and make it in a tangible form. It seems to me very easy.

Dr. Eve: I move that the matter be referred to the Councilors.

Seconded.

Dr. Gallagher: Is the question before the House the matter of the members of the Virginia society or the residents of Virginia joining the State Association, or is it a question of the local practitioners of Tennessee joining Virginia, or is it a question of the members of one county society affiliating with another?

President: The question before the House is as to the members in one county of Tennessee affiliating with the county society in another county.

Dr. Eve: I withdraw my motion.

Dr. Gallagher: If it is a question of the members of one county society affiliating with another county society, that matter has already been settled, and the burden of responsibility is on Sullivan county and Knox county and is not within the jurisdiction of the Councilors, inasmuch as the constitution provides that no member of one county in which there is an organization shall join another county. He can join another county only in the event his own county has not a medical organization.

Dr. Miller: Doctor, you are wrong on that, because I have been a member of the Council since the reorganization, and that is the plan that was furnished it at one of the earlier meetings, and it was decided that the Councilors could arrange this matter, and I believe it was brought before this body.

Dr. Gallagher: Which has precedence—ruling by the Councilors, or constitution of the society?

Dr. Miller: There is nothing in the constitution that conflicts with it.

Dr. Gallagher: Dr. West, will you read that constitution, please?

Dr. Vance: This young doctor over here is exactly in accord with my ideas about that. I think I can throw a little light on the Knox county matter. I was a member of the Knox County Society, and at the time I made ap-

plication to Knox county for membership I did it for the reason that there was no organization of Sullivan county, and I came before the Council and made the statement that I was about to lose my membership in the American Medical Association in consequence of not being in affiliation with my State Medical Society, and the Council gave me permission, temporarily, to unite with any society of my choice, and I made application to Knox county. I suppose I am the only member of the profession in Sullivan county who is a member of the Knox County Society.

Dr. Miller: Mr. Chairman, gentlemen, I want to read Chapter 12, Section 9: "A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides."

Secretary: Now, doctor, if you will let me, I will read you a section—"Section 4, Chapter 12: Each county society shall judge of the qualification of its own members; but as such societies are the only portals to this Association, and to the American Medical Association, every reputable and legally registered physician who is practicing or will agree to practice non-sectarian medicine shall be entitled to membership." Also Section 9, Chapter 12, "A physician living on or near a county line may hold his membership in that county most convenient for him to attend, **on permission of the society in whose jurisdiction he resides.**"

Every reputable physician may be admitted to membership with the consent of the society in his own county. That point seems to be missed, though I have tried to make it. I did not try to bring up the matter that somebody had belonged to Knox county, because Dr. Vance went into the new society. Now here is a case. Two gentlemen went to a county society meeting and stated that they did not get along well with the men in their own society. Without any question they took them in. They got no permission from their own society or the Council, but simply because they did not like somebody went over

and joined the other society. There are men belonging to county societies in the state today simply because they prefer to belong to those societies rather than the society in their own county, and they have not asked permission from their county society. As Dr. Vanee has told you, there is an effort to weaken this new society in Sullivan county that is struggling for existence, and which is entitled to the protection of this body.

I believe that the suggestion to refer this matter to the Board of Councilors is a good one.

Dr. Miller: I renew the motion.

Seconded.

President: The question before the House is to refer this question to the Councilors.

Dr. Richards: May I speak to the motion? As to the point of order, Mr. President, I would like to say this, I think we are getting the cart before the horse, just a little. According to the by-laws just read here by Dr. West, the local county society of Sullivan county has a right to say who are the qualified men to be members of their society. Now that makes them members of the State Association by virtue of their being members of the Sullivan County Association. Now, then, if there are disgruntled members, or men, in Sullivan county who do not want to affiliate or be members of the Sullivan County Association, and haven't gotten this legitimate excuse for being members of some other county association which is provided for there in the by-laws, then they cannot be members of any county society or the State Association. That is settled by this law. Now, then, if they in any way try to take membership illegally, the county society is the sole council—it is the judge and the jury as to their qualification, and they cannot enter the State Association unless the Sullivan County Society takes them in. Now, then, even if some men in the society need dealing with, then that society can pass on his conduct, they may expel him. If he wants to appeal from that, he can appeal to the Board of Councilors, and let them pass upon the case, but I do not believe the question is properly before us to refer to the Board of Councilors. If I understand it, now there are some men who have just turned up and been accepted by an out-

side society. Now that is the society that wants to say—

Secretary: Mr. President, I cannot make one point clear. That is not the question at all. The question is here is a new society, organized through the efforts of a few men there, and yet some men residing in the county do not want it to exist because they prefer to belong somewhere else.

Dr. Richards: These other counties it looks like would expel them.

Dr. Eve: I think the suggestion of the reference to the Councilors would be a matter, to say the least, of solution. That is what they are for, after all. But we do not want to use any authority in order to make a man go back to his own county in order that he may, perhaps, be examined, and his dirty linen washed, when he don't want it washed. We want to get these men in concert with Dr. Vanee and other men who are striving as hard as they can to organize the society. Refer it to the Councilors in order that they may take the matter up in a conciliatory manner, and see if they cannot ease the matter in some way, and make them come around.

President: The motion before the House is to refer this to the Councilors.

The motion prevails.

Secretary: The next matter is a letter from Dr. N. P. Colwell, suggesting that this Association endorse the appointment of a Hospital Committee. (This letter appears in full in the report of the Secretary.)

President: You have heard the suggestion, gentlemen. Do you want to put this in the form of a motion?

Dr. McCabe: I want to ask what authority this committee will have to investigate a hospital, although it will be a committee from this Association.

Secretary: No authority, except, I presume, after a courteous request of the institution.

Dr. McCabe: Suppose, for instance, an institution don't grant that courteous request. What would be their report in regard to that institution?

Secretary: That that courteous request had been refused.

Dr. McCabe: In other words, they would

be given a black eye, or what would be done in the circumstances?

Secretary: I would assume that Doctors Ellett and Burch and Bromberg would certainly not take such an unfair advantage of such an institution. I understand they are undertaking to explain the real facts of the hospitals all through the country, and that ought to be done through the co-operation of the state associations and committees composed of members of the various state associations.

Dr. McCabe: There would be some hospitals that would object to giving these gentlemen information. While I would not object to it, I would be glad for them to come any time, yet it looks like to me we are taking a rather advanced step to appoint a committee whose duty it would be probably to request a thing that might not be granted, and then, for the simple reason that this request was not granted, that the hospital receive a black eye.

President: Dr. West's motion was to endorse the personnel of this committee.

Secretary: I simply laid this matter before the Association.

A Delegate: I move that the committee be approved.

Dr. Gallagher: This motion, I might say at the outset, in my opinion, should be adopted. There is a well concerted plan on foot by the Council on Medical Education, as you are probably aware, to classify hospitals, to the end that a fifth medical year may be added to medical education—I believe that is the sum and substance of it. Before that can be done, it is necessary to find out if there are sufficient hospitals with facilities that will furnish positions for the graduating classes of the medical schools. That is the underlying feature of this rating.

Whether this Association endorses that or not will make very little difference to the Council on Medical Education. As a matter of fact, they have already done it. The hospitals of this state have already been graded, and it has all been filed, for that matter. There is one point, it is a courteous request that men that have already acted be a committee of this state society, to lend the moral support of this society. Before that motion is acted upon, I should think it would be well to know whether these men will be willing to serve. I believe I am right that Dr. Burch told me he had declined.

Secretary: Dr. George R. West, Dr. Ellett, Dr. Bromberg.

Dr. Gallagher: Just Dr. Ellett, Dr. Bromberg and Dr. West. I think this Association should endorse this committee and lend its moral support to its effort.

President: It is no question for this House to determine what kind of committee they will appoint. All we have to do is to approve the personnel of this committee.

Dr. Gallagher: I understand that.

President: All in favor of the motion that we endorse the committee of the Council will please make it known by saying "Aye," opposed "No."

The motion prevails.

Secretary: I have one more communication from the American Medical Association, the official request of the Secretary of the A. M. A. that the attention of the House be called to the action of the Delegates of the American Medical Association with reference to the proposed section of the by-laws, that is, to define the judicial power of the A. M. A., before final action shall be taken. Dr. Craig informs me that the judicial council holds "that all questions involving members of the same constituent association, primary jurisdiction shall be in the courts of the constituent association, and such questions shall come to the judicial council only on appeal." The proposed section of the by-laws, Mr. President, is as follows, and has been submitted to all of the state societies for their action.

(This matter is more fully set forth in report of Secretary.)

These are the changes (reading from Report of House of Delegates, A. M. A.) that are proposed, and the American Medical Association refers them to the various state societies.

Dr. Burns: Do you want that adopted?

Secretary: Want it adopted if you want it adopted.

Dr. Burns: I move you, then, Mr. President, that the delegates to the American Medical Association be instructed to vote for this amendment. Seconded.

President: It is moved and seconded that the delegates to the American Medical Association

ciation be instructed to vote for this amendment.

Secretary: It is the proposed change in the by-laws, and the only one mentioned in their proceedings, so I do not suppose there will be much trouble in knowing which it is.

President: The motion prevails, and the delegates are instructed to vote for this change.

Secretary: There is one other item of new business in the Secretary's report, and that simply refers to an expression from the House of Delegates as to the advisability of continuing the physicians' directory in the Journal. We have had a good deal of complaint about it. Members pay \$5.00 a year to get the names in this physicians' directory. There are men in the Association who seem to think that it is a very unethical proceeding, and I have refused to take a number of names, awaiting an expression from this body. I would say that the best state journals in the country have much larger state directories.

Dr. Crook: I move that this directory in the Journal be continued.

Seconded.

A Delegate: At the same price, or increased? (Laughter.)

Motion carried, and the directory ordered continued.

Secretary: I have nothing else.

Dr. McCabe: Here is a matter I want to put before the House: "Be it resolved that the Secretary be empowered to engage an attorney, whose fee is not to exceed one thousand dollars per annum, to co-operate with the State Board of Medical Examiners in prosecuting persons who are practicing medicine illegally in the state of Tennessee."

The reason this is introduced is because we know that there are many men practicing medicine in the state of Tennessee illegally. We know that the negro doctor, or the Indian doctor, or whatever doctor he may be called, in Roane County, came into the state, and was practicing medicine illegally, and that the men in that county, upon their own responsibility, employed a lawyer, went to a great deal of cost, and finally had a permanent injunction taken out against this man,

and he is now prevented from practicing medicine.

This organization, in my opinion, is evidently for two purposes—one is for the protection of the medical profession in the state of Tennessee; another is for the protection of the people in the state of Tennessee against quacks, etc. You may say that a third, and very important function of this society is, of course, to read scientific papers and exchange ideas.

I believe with the employment of an attorney who is to aid the Secretary of the State Board of Medical Examiners we can arrive at some definite conclusion, not only as to the number of men who are really practicing medicine illegally in this state, but we can arrive at a definite means by which to cleanse this state of these parasites. Therefore, Mr. President, I move you the adoption of this resolution.

President: This resolution is before the House of Delegates. Is there a second?

Secretary: To get discussion on it, I will second the motion.

President: You have heard the reading of the resolution, it is seconded, and it is now open for discussion.

Dr. Dulaney: I move this be postponed until tomorrow morning. If it could be connected with the defense action it would be a wise idea. Probably it would be an incentive to the physicians to pay this extra dollar for the medical protection.

Secretary: I would like to suggest an amendment to Dr. Dulaney's motion, to the effect that this resolution be referred to a committee to investigate the advisability of this procedure, and that this committee report to this body tomorrow.

Dr. Tigert: I want to amend the amendment by putting Secretary DeLoach on it, for the reason he knows more about this than anybody in this House of Delegates, and he can give the committee a great deal of valuable assistance.

Dr. Cowden: I would suggest that you add the Treasurer to that committee, because I see where you will bankrupt the Association if you spend a thousand dollars.

Dr. Cullom: I move you that that motion be tabled.

President: Which one?

Secretary: Dr. Dulaney accepts my amendment, and I certainly accept Dr. Tigert's.

President: The motion is that this matter be referred to a committee who shall report to this House tomorrow morning, and that Dr. A. B. DeLoach, Secretary of the State Board of Medical Examiners, be a member of the committee. That is not a very complex matter.

Motion prevails.

Dr. Crook: I move that Dr. Cowden be on the committee also.

President: I put him on dry so.

Dr. Tigert: When is this committee to report to us?

President: Tomorrow morning.

Dr. Crook: I move we adjourn.

President: This last committee is made up of Dr. DeLoach, Dr. Cowden, and Dr. Crook.

Dr. Savage: Do we all understand that this is the last meeting at which new business can be brought up?

Secretary: I have made a statement that this is the last meeting at which new business can be brought up, so if you all have any new business you care to bring before the House, this is the time to do so.

Dr. Zirkle: There is one little matter, gentlemen, I want to bring to your attention, the matter of our prosecution over in Roane County of that negro. We have had a lot of trouble there, and have had quite a deal of expense, and we are not through with it yet. The society, through its members, has contributed sufficient funds to bear the expense up to the present. That does not include lawyers' fees, either, for we haven't paid our attorneys a single cent. Our expenses up to the present time have been about \$160. There are only fifteen members in our Roane County Society, and our attorneys figure that it will take a thousand dollars to fight this case through. We now have a permanent injunction against this man over there, but as he has, so he claims, made about \$30,000 in the last year off the people, he still has some funds on hand to fight us with. The physicians over there feel that if the state can assist us, or individual physicians of the state society, or the individual societies in the state

can assist us, financially, we shall be more than glad to accept it.

Dr. Miller: It is getting late, and I move that this matter be referred to this committee that was appointed on the question of prosecuting quacks, and that Dr. Zirkle meet with the committee, and that they report on that tomorrow morning.

Dr. Dulaney: I am always for the interest of the State Medical Society, and today I want to bring before you a matter of vital importance, I think, to every member of the society, and that is the question of making East Tennessee, Middle Tennessee, and West Tennessee Medical Societies a part of the State Medical Society, and letting them elect their delegates to represent these medical societies in our state.

President: Will you please hold that up until we get rid of the other matter before the House. The motion before the House is to refer the suggestion of Dr. Zirkle to this same committee appointed to act upon the attorney matter.

Dr. Reagor: I think we are all interested in this prosecution in Roane County, and it does seem to me every physician in the state is interested, and I think the state ought to reimburse and stand by these men in the prosecution of this fake, and not refer it to any committee.

President: The motion is to refer.

Dr. Wingo: Come down to Weakley after they get through with Roane, and take care of Uncle Johnson, an old negro we have down there.

The matter was referred to a committee made up of Dr. DeLoach, Dr. Cowden, and Dr. Crook.

Dr. Dulaney: I think it would be a wise idea to appoint a committee to look into this matter and report in the morning as to the advisability of formulating some plan whereby these societies could be made a component part of the State Medical Society. The reason of that is two-fold. One is that our Vice Presidents—we have one Vice President from each grand division of the state—this could be planned so that we could nominate these three men from each grand division of the state for Vice President. It would encourage a better interest and better attendance in our

societies, because the man who comes from that part—our by-laws provide that he would be the President of the society, that is, the Vice President of East Tennessee would be the President of the East Tennessee Medical Medical Society. That is already provided for in the by-laws of the State Medical Society, and I can say this, there would not be a better State Journal in the South anywhere than ours if we could put this in action. As it is, the West Tennessee papers go to the Memphis local monthly. It is not right—the Tri-State Society may do as they please, but the West Tennessee Medical Society's first debt is to their state society, and then if they want to organize anything else—all right. The Tri-State Society is all right, I belong to it, and am interested in it, of course, but I believe the West Tennessee, the Middle Tennessee, the East Tennessee Society should be a part of the state society, as much so as the counties, and they should elect a delegate, who should be honored by the House of Delegates, and have a seat here, just as much as the delegates from the county societies.

I know that most of you doctors will certainly agree with me on that, and I move you, Mr. President, that you appoint a committee of five to talk this matter over and take it under advisement and report tomorrow morning, and see if some plan could be suggested to the House of Delegates whereby we can refer the matter to the county societies throughout the state, and take it up some way.

President: I would like to ask, in that connection, if these societies have manifested any inclination to become affiliated societies.

Dr. Dulaney: They did not know whether the State Society wanted them, or not. When that is settled, it is up to us to ask them.

President: Is there a second to the motion?

Seconded.

Dr. Sheddan: The prime object of the East Tennessee, Middle Tennessee and West Tennessee societies is to do missionary work, to get men interested in medical societies, and there are a great many men who are members of the East Tennessee, Middle Tennessee and West Tennessee Medical Societies who are not members of the State Medical

Association. Are you going to try to force these gentlemen, who are ethical, reputable practitioners of medicine, to join the State Medical Association? There are the East Tennessee, the Middle, and West Tennessee Medical Associations, and there is an Upper Cumberland Medical Society, and this matter has been considered before, and threshed out. I know the Middle Tennessee Medical Society would not care in any way to belong to the State Society. They do not care to belong to the State Society.

Dr. Dulaney: He is sadly mistaken in the idea suggested by me. My idea is to invite them, if the committee sees fit, after discussing it thoroughly, to invite them to become members of the State Society.

President: I understand Dr. Sheddan's point to be, the members of these district societies would have to qualify before they could be admitted. They do not belong to their local societies.

Dr. Sheddan: You are just piling up a lot of business that we cannot get through with, so I move that the motion be tabled.

Seconded and carried.

Adjourned to meet at 8 a. m., Thursday, April 15, 1915.

Morning Session, Thursday, April 15, 1915, 8:00 a. m.

Called to order by the President.

Dr. Tigert: Mr. Chairman, what constitutes a quorum in the House of Delegates

President: I do not know, sir.

Dr. Tigert: There is not a third of the delegates here.

President: Dr. West, do you know what constitutes a quorum of the House of Delegates?

Secretary: I am sorry—I don't know. And somebody has taken all the constitutions and by-laws we had. I do not think there is any statement about a quorum in the House of Delegates, Mr. President.

President: There is nothing that I remember, and we certainly can dispose of some matters that won't be pressing. I remarked a little bit ago that we didn't have the reading of the minutes on yesterday because Dr. West was not quite ready, and he seems to be in the same condition this morning.

Dr. Tigert: Move we dispense with it.
Seconded and carried.

Secretary: I think the first order of business would be the report of the Nominating Committee.

President: I believe that is a constitutional arrangement that does not require any motion to be acted upon, Doctor.

Dr. Tigert: Point of order, Mr. Chairman. On yesterday I moved that the medical defense discussion be postponed and placed as a special order of business at 8 o'clock this morning.

President: Yes, sir, and that was passed, but you are not—I take it that you are not quite ready for that business this morning.

Dr. Tigert: No, sir: Dr. Miller ought to be here.

Dr. Savage: Both of those matters are of such importance that a larger attendance of the delegates ought to be present, it seems to me, both the election of officers and the consideration of the medical defense matter. I would move that these be deferred until just a little later, until others come in.

Seconded by Dr. Tigert, and carried.

Secretary: I have the report of the Committee on Memoirs by Dr. Woodyard, the Chairman.

President: That would be a proper matter to take up. Are you ready for the report of the Committee on Memoirs?

REPORT OF THE COMMITTEE ON MEMOIRS.

Your chairman regrets that he is unable to present a biographical record of each member of the Association deceased during the past year. He hoped, and had requested other members of the committee, as well as Secretaries of County Societies, to supply data necessary for a full report; up to the present he has received memorial reports of the following:

Dr. Rufus Pitts, Murfreesboro, which is submitted with the request that publication in the Journal follow. Your chairman also recommends that a memorial page be dedicated in the Journal inscribed with the names of the following members who have died during the past year:

Dr. Rufus Pitts, Murfreesboro; Dr. Paul F. Eve, Nashville; Dr. H. K. Edgerton, Lebanon; Dr. J. B. F. Dice, Morristown; Dr. W. G. Compton, Carroll County; Dr. W. B. Rogers, Memphis; Dr. G. B. Thornton, Memphis; Dr. R. B. Nelson, Memphis;

Dr. L. B. Walton, Robertson County; Dr. J. F. Wilson, Tipton County; Dr. W. C. Ransom, Marshall County.

Respectfully submitted,
S. W. WOODYARD,
Chairman Committee.

Secretary: I have attached to that report, Mr. Chairman, a memorial report signed by Dr. W. C. Bilbro on Dr. Rufus Pitts, of Ruthersford county, and publication of this is requested in the Journal.

Moved, seconded and carried that the report be received and adopted.

Secretary: Resolutions lying over from yesterday. First, amendment suggested to the by-laws by Dr. Savage: "Amend chapter 1 of the by-laws by adding as section 5 the following: Section 5: The Section of Eye, Ear, Throat and Nose may be formed, which may hold a separate session at some time of the annual meeting for the discussion of such technical questions as would be profitless in the general sessions. All other papers pertaining to these organs to be in the general program. The officers, chairman, vice chairman and secretary, of this section, shall be selected by its members."

Moved, seconded and carried that this amendment be adopted.

Secretary: Resolution, Mr. Chairman, upon which action was deferred until this morning, and referred to a committee: "Be it resolved that the Secretary be empowered to engage an attorney whose fee is not to exceed \$1,000 per annum, to co-operate with the Secretary of the State Board of Medical Examiners to prosecute persons who are practicing medicine illegally in the State of Tennessee." Offered by Dr. McCabe.

Dr. DeLoach: We tried to get our committee together last night, but we were unable to do so for some reason or other.

President: Banquet. No report from this committee. What disposition?

Dr. Zirkle: Mr. Chairman, the committee agreed to meet at 9 o'clock.

Dr. Miller: I agreed to postpone action until that time. I move you that we postpone action until 9 o'clock.

Dr. Tigert: Is that point open for discussion?

President: The motion to postpone has not been seconded.

Seconded.

Dr. Tigert: Mr. Chairman, Gentlemen—I want to speak just a moment on that. This is a very important resolution. There is no question in the world about that. The state has a great many illegal practitioners, and these illegal practitioners are giving the regular profession a great deal of trouble, to say nothing of the enormous amount of damage they are undoubtedly doing the rank and file of the people. Now I realize fully that this is a pretty big step we are attempting to take, and, while I do not believe that there is any man in the House of Delegates but what will consider this a good move, provided we can afford to take it, and, if we can, I think it ought to be done. Therefore I am not willing to let this go over until the afternoon session, for the reason that everyone knows there will not be half a dozen men in the House of Delegates this afternoon, and the chances are we will not be able to do any business at all. Therefore I move you, Mr. President, that the House of Delegates go into this matter as a committee of the whole and consider this matter.

Dr. Savage: The committee is out for the purpose of considering it now.

Dr. Tigert: They can't get together until 9 o'clock.

Dr. Savage: On that motion I want to say it is better for the State Medical Association to have an empty treasury than to have a full state of quacks. I would rather for our treasury to be empty. I believe now is the time to strike, and strike hard, and I believe that a good portion of this thousand dollars, if it is appropriated this year, should go towards the fight against that abomination in Roane county.

Dr. Malone: I beg to say that I am heartily in favor of the payment of attorney to assist the State Medical Examiners.

Dr. Tigert: Point of order. The motion before the house is whether we shall go into a committee of the whole and discuss this thing, and we are already here discussing it.

President: We are just a little previous in the discussion.

Dr. Miller: I would like to know if we can

add the medical defense to that and have it as a whole, and then we won't have to keep a separate record.

President: Probably we had better have a separate record.

The motion that the House of Delegates go into the matter of engaging an attorney to prosecute illegal practitioners, as a committee of the whole, carried, and it was also moved, seconded and carried that the officers of the House of Delegates act as officers of the Committee of the Whole.

Dr. Malone: I wish to repeat, Mr. President and gentlemen, that I think the resolution an excellent one, and I think we ought, as a society, to assist in every way we can the State Board of Medical Examiners in enforcing the law. But I don't think we ought to bankrupt the treasury in doing so, and to appropriate as much as a thousand dollars might be incompatible with our resources. We would like to know something about that.

President: Dr. West, you have been called upon by the gentleman to give some idea of the finances, so we may know what we are able to do.

Secretary: The financial status of the Association is this: There is a balance in bank of about \$1,600.00, may be a few dollars more, may be a few dollars less. There are outstanding obligations which amount, I presume, to some forty or fifty dollars, at the outside. That is just about the balance that has obtained for several years.

The membership of the Association at the present time, for 1915, is something over 1,200 members, about 1,230, I think, though several reports came in yesterday, and they are not entered on the books, and I cannot tell you the exact number. The membership of the Association on the first of January, for 1914, was 1,444, the largest membership in the history of the Association. Now, gentlemen, I am frank to say to you that I doubt exceedingly whether or not we shall be able, in fact, to reach the total in 1915 that was attained in 1914. What I am trying to say to you is that I think our maximum income was reached in 1914. These are hard times. The cotton country has been hit. The mining country has been hit. We have all been hit, and two or three dollars means a good deal to some

doctors. I have been told, for instance, by a number of doctors that collections are almost impossible. One told me that in seventy-five days his total collections had been \$14.00. This man has been a member of this Association, but is not now a member of the Association. Some of them just simply haven't the \$2.00 to pay their annual dues. This is the kind of fix you are in, gentlemen; and, while I am in sympathy with this move, I do not believe you can afford to go on record as appropriating a thousand dollars for this purpose. I believe, however, that it will be possible to obtain legal counsel of ability for less than \$1,000.

Dr. Vance: I feel like we are not striking in the right direction. As you see from the report of our Secretary there, we have the money to pay an attorney \$1,000 a year, but, if we have, I think it would be a bad idea to do it. How would this do? Our treasurer stand behind the State Board of Medical Examiners in the prosecution of these illegal practitioners, so far as our ability will permit, and instead of paying some attorney a thousand dollars, who perhaps would pay very little attention to the business, let the State Board of Medical Examiners employ an attorney at the best terms possible, wherever his services are needed, and pay the bill through the treasurer of the State Association. My judgment is that in that way we will get our work done better and more economically, and know what we are doing. If I am not in error, several years ago the Board of Medical Examiners had an attorney employed in Johnson City—Dr. Eroyles knows something about it—with the understanding that he would, for \$10.00, prosecute any illegal practitioner that we called his attention to. My judgment is that arrangement could be made all over the State, and that would cost this Association less, and probably we would get better service.

President: I understand the resolution to read that this attorney be employed at a fee not exceeding \$1,000.

Dr. Crook: Just have one attorney, is that the idea?

President: That is what the resolution says.

Dr. Dulaney: That is a very important question, of course, to the medical profession,

but the Secretary of the State Board of Medical Examiners will bear me out that it is through the grand jury that indictments are found against illegal practitioners. I want to say, gentlemen, regarding the employment of an attorney in the state of Tennessee, that you might get the best counsel you could possibly obtain to save your life, and the grand juries in the different counties throughout the state would think that this man was dictating to them what they should do, and you would never indict a man under God's sun. The only way under the shining sun that we can expect to accomplish anything in putting these quacks down is through our county societies. If each county will appoint a medical commissioner, and have all such cases reported to him, and then insist on the Secretary or some member going to that point and going before the grand jury, I think, then, we might accomplish something, and it would be better than employing an attorney at \$1,000 a year.

Dr. Tigert: Dr. Dulaney, will you yield to a question?

Dr. Dulaney: Certainly.

Dr. Tigert: Do you know how Choctaw Bill, the Indian doctor, up here in Roane county, was stopped from practicing medicine? Well, now, he was stopped under the shining sun, and he was stopped by an attorney.

Dr. Dulaney: Doctor, that may be true, but it takes a grand jury to indict him.

Dr. Tigert: Well, up here in Roane county a bright young attorney stopped him after the grand jury was ready to turn him loose.

Dr. Dulaney: I know the law in regard to it, you may get your book. Dr. DeLoach knows positively that in Union City, in the West Tennessee Society, the judge came up there and said in an address—about some fellow who was practicing illegally, the grand jury indicted him, and afterwards Dr. LeLoach went up there, but nobody could do anything. The case was nolle prossed, and the only way in the world we can prosecute a man—a magistrate can fine him, he can appeal the case then to the circuit court, or something of the kind, but an indictment must be found by the grand jury, and it is through the grand juries of the different counties and different courts that we have got to work. I know this to be true.

Dr. DeLoach: The first order of procedure against an illegal practitioner, as Dr. Dulaney has indicated, is through the grand jury. The law specifically states that. Of course the inquisitorial powers are resident in the grand jury.

The best way of prosecuting these cases is for someone to go before a magistrate with such charges as are appropriate to the case, and then the man is bound over to the grand jury, he is bonded and bound to the grand jury. It is then, after the grand jury has acted upon it, that the services of a lawyer are employed. It is a very difficult matter to get the attorneys general throughout the State to take a lively and active interest in these affairs. But the members of the profession, as I have stated before, are able to do more toward the suppression of illegal practice than all the courts. If each society would appoint a committee, say, of two or three men, and would get after these fellows, we would have the very best possible results. Several counties in the State have done that, notably the Nashville Academy of Medicine and the Obion County Medical Society, and Dr. Zirkle's county, Roane. The doctors took a pretty lively interest in it, and in all of these cases—no, in the Nashville case we got conviction but the fine was never collected—and the case of the chiropractor in another county is still pending. Indictments were found in several cases in the Obion county courts, but the case was finally nolle prossed on the ground that the indictment was drawn incorrectly.

Now, in fighting the illegal practitioners in West Tennessee since I have been a member of the board, with the exception of the Obion county case, I have been successful in bringing about conviction without one dollar's cost to the State Board or anybody else, but I had to get in behind these cases very vigorously myself. In one particular case I went before the grand jury seven times and presented myself on two other occasions, but on account of the press of business before that body I was not admitted. The best way, or another good way, to get these men, is to keep preferring charges. After having once failed in making a charge stick, just await your opportunity and you will find that you will catch them again, and you will get them into the hands,

most of them, of pretty good lawyers. They generally get lawyers to defend them, you know, good ones, and you can bankrupt them. Every quack in Memphis has folded his tent and silently stolen away, and I believe the same thing can be accomplished in other sections of the State. In the larger cities, where quackery obtains to the greatest extent, unfortunately we haven't representatives. In Knox county we have, but in Nashville and Chattanooga and the other larger towns we have not.

Dr. Miller: I want to say, first, I am in favor of prosecuting quacks as far as we can, but I want us to go a little slow on our treasury. I want to ask the Secretary, first, is this \$1,500 to our credit is after the present salary of the Secretary-Editor has been paid, or if that is to come out of this \$1,500?

Secretary: It has already been paid for 1914, everything has been paid except some thirty or forty dollars of incidental accounts.

Dr. Miller: I am glad that we have that much.

Dr. Malone: Does the \$1,500 include the \$500 that is to be set aside for the medical defense?

Secretary: It includes everything that you have.

Dr. Crook: That does not include the medical defense.

Secretary: Dr. Malone is exactly correct—we haven't but \$1,600 in the world, and I do not know what amount must be used for medical defense, but it must come out of that.

Dr. Miller: Have the expenses for the Legislative Committee for this year been paid out?

Secretary: All but a little.

Dr. Miller: You must bear in mind that there was \$500 put at the disposal of the Medical Defense Committee. We hope we won't have to touch a cent of that, but we may have to touch that and more. We don't know where we are going to end, but it will be 1916 before the accounts of this year of the Medical Defense Committee can be closed. There was \$250 of it at the disposal of the Legislative Committee,—that is \$750.00. Here comes Dr. Zirkle from Roane county with the worst case we will ever have, probably, and they will be very likely to have considerable expense, and must be helped. They have already borne a

great deal. Some of the other county societies have promised aid, but he comes here asking aid to the extent of \$1,000, and I think we ought to go a little slow on this proposition. I do think this gentleman ought to have aid. I do not think we will be able to give them the \$1,000 they want, but we ought to give them, certainly, something for the aid of that Society. That is just as important as anything else, and I don't see, myself, how we can go along and appropriate very much more.

Now I want to ask Dr. LeLoach a question. The Medical Examining Board receives in the course of a year, I guess, three or four thousand dollars for examinations. Their expenses must be paid out of that; that does not amount to very much, and the remainder of that is turned back to the treasury of the state, is it not? Why does not that Board have the right to employ attorneys if the state's attorneys can not do the work, and they are a part of the machinery of the state; why don't they have a right to go ahead and employ attorneys just as this society would have, and let this Association appoint a committee, if you please, in each county, of more than one man in each county, whose duty it is to go before the grand jury to take the matter up with the Secretary of the Board of Medical Examiners, and see if their treasury could be used in the prosecution of these cases, because it is they, more than anybody else, who are responsible for the prosecution of these cases. We are ready to co-operate, but our treasury is empty. We don't get four or five thousand dollars a year to expend in matters of this kind, and they do get it, and, as I understand the law, they have the right to pay for the necessary expenses of carrying on that office, and, if this is not one of the necessary expenses I don't know what it is.

Dr. Zirkle: There seems to be a mistake right there as to the matter of the Roane County Medical Society asking a thousand dollars of this particular body. We are not asking for a thousand dollars. I stated in my talk yesterday it would probably take a thousand dollars to carry this thing through. That includes what we have already done. We have already raised \$160 over there, and we have borne the expense to date. There is nothing due now to be paid out. But we are

only half way through this case. The next move this man will take is that he must be tried on the facts. The case will probably go to the Court of Appeals, and on to the Supreme Court. There will be quite a good deal of expense in regard to this incurred in this matter, and in addition to that we must take care of our attorney. He has not had a cent as fee. We have had two additional attorneys that have not been paid yet. Now, it seems to me that this Association should take some move along this line of prosecuting these quacks that are dumped into this state.

My plan is this, for this Association to provide a retaining fee for some attorney, let him act with the State Board of Medical Examiners, let him be at the call of the different county societies. Now, I think that any county would be willing to bear the expenses—traveling expenses, hotel bills, etc.—of any attorney, if he is provided by the Association to go to the different counties and prosecute these cases.

Now, we are not objecting to the expenses of taking care of these cases. What is hurting us is the provision for attorney's fees, if we employ an attorney and he wants \$500 to carry this case all the way. I have approached different attorneys, and if you get a man, a good man, you have got to pay him. We first tried local counsel. It wasn't worth anything. It didn't do any good. It takes a man that is posted on law, on medical law, law as applied to medicine and medical practitioners.

Now if we can have some assistance by this Association as an association, and if not as an association as individual members (quite a number of members have suggested to me that this matter be brought before the Association) and funds provided by individual subscription, I think it would be the right thing to do. This would not draw on the treasury at all. It strikes me that that would be a very good plan. I know a number of men that are ready and willing to subscribe. Now, if we cannot provide a thousand dollars, suppose we supply a retaining fee of \$500 to an attorney. I think a reputable attorney could be obtained—Dr. West has been in consultation here with an attorney that would probably be willing to serve in this way for a less fee than \$1,000,

say \$500.00. I believe the men of this Association will by individual subscription, here today, supply it.

Dr. Dulaney: I don't like to take the floor too often, or anything of the kind, but I will say this, if you take \$50,000 in cold cash and employ forty attorneys, you have got to indict a man, you must go before the grand jury and get an indictment, in Roane county or any other county, before you can employ any attorney to prosecute him, and we can take this \$500 and use it—

Secretary: Will you allow me to make one suggestion: You are harping on this grand jury business. I want to tell you, as a matter of fact, that the grand jury in Roane county indicted this man, and he was tried in the criminal court, and the court turned him loose. But the man is stopped nevertheless, and it was done by one earnest, bull-headed young attorney who went there and got an injunction, and it was made permanent by the court.

Dr. Dulaney: My position is this—it is not in employing attorneys so much, but it is in the State Society getting as good results on as little cost as possible, and my idea is this, for the State Society, the House of Delegates, to have the Chairman appoint a committee of three, or more, as a committee of defense, and make an appropriation of \$100.00 for each man for the prosecution, and they can take it up in an advisory way with the different county societies and insist on their appointing a legislative committee, and this \$300 will go much further than two or three or four times that amount in any other way, and then let them make a report back here next year, and say what they have done in regard to this matter.

President: Are you offering that as an amendment to the resolution we are discussing now?

Dr. Dulaney: I am just making this as a suggestion.

Dr. LeLoach: To correct any possible erroneous idea that may exist, I want to make this statement: The suggestion as to the appropriation of any amount of money set aside for the prosecution of illegal practitioners did not have its origin in the Board of State Examiners. That emanated from Dr. McCabe— isn't that right, Dr. Tigert?

Dr. Tigert: Yes, sir.

Dr. LeLoach: I want to say further, the expenses of the Board of State Medical Examiners are very much larger than any man has any idea of. There are very many expenses. Here recently, too, is a medical law that cost two or three hundred dollars expenses, just traveling expenses and hotel expenses, and under the operation of the new law that is put into effect the funds in all probability will be insufficient for the conduct of the affairs of our Board, and the law specifically declares that in the event there are not sufficient applications to furnish a revenue large enough to take care of the expenses, that that deficit shall be prorated among the members themselves. Now, I don't know that anybody is so patriotic and philanthropic among the members, and so imbued with the love of his profession, under these circumstances, as to wish to deplete the treasury and be met with the possibility of having to pay for the privilege of conducting the affairs of the Examining Board.

Dr. Tigert: I want to make a motion. It seems that we have a matter here of some importance, and which we are all for, but we don't know the technique of getting it. I move you, sir, that this matter be referred to the next Legislative Committee, appointed by the incoming president, and that they make a report to the House of Delegates next year on any possible ways and means for attaining this end.

President: Is that an amendment to Dr. McCabe's motion?

Dr. Tigert: No, I am disposing of the motion. I am moving that the matter be referred to the incoming Legislative Committee and that they report to the House of Delegates next year on any means of obtaining this thing.

Dr. Miller: I am going to make a motion in lieu; that is, appoint a committee composed of the Secretary of the Association, the Secretary of the Board of Medical Examiners, who is a member of this body, and one other member, to appoint one or more members in each county society on the question of illegal practitioners, and that they take the question of the prosecution of these illegal practitioners up with the Board of Trustees, and that the

Board of Trustees be given power to act as they see best, and as our funds will justify.

Dr. Crook: He is out of order. You must dispose of the first motion first. Either table it or dispose of it. You can amend it, but you can not make a motion in lieu.

President: All in favor of the motion of Dr. Tigert please make it known by saying "Aye," those opposed by saying "No"—to refer it to the committee of next year.

Carried.

Dr. Savage: We have accomplished the work for which we adjourned and met as a Committee of the Whole. I move that the Committee adjourn and make a report to the House, and the House resume its regular business.

President: The question is for the Committee of the Whole to be dissolved and the House called to order for its report.

Seconded and carried.

President: The House of Delegates is in session again and ready for the report of the Committee of the Whole.

Secretary: The Committee of the Whole decided to refer the resolution relative to the employment of an attorney to the Legislative Committee, to be reported on at the next meeting of the House of Delegates, April, 1916.

Dr. Crook: I move the report be adopted.

Seconded and carried.

President: Now you are ready for your Roane county business, or anything else.

Dr. Yarbrough: I move we appropriate \$100 to aid these men each year until the thing is decided. If we can appropriate more, we will do it. Most of these cases that are begun you want to carry to the Supreme Court, and it takes some time to get through with them.

Dr. Crook: I don't think we can bind next year.

Dr. Tigert: I move that the Secretary be instructed to write a letter to the membership of the Tennessee State Medical Association, asking each man to give what he can as a voluntary contribution to this cause. If we get more than is needed for this case it might be utilized for other purposes of a similar character. We might get a good deal more than is needed. I do not think it a good precedent to go into our treasury to meet such expenses, and I offer as a suggestion that we simply em-

power the Secretary to do that. Many men will give \$5.00, and I believe it will work out more advantageously than merely appropriating any given amount. There are a number of men that will be glad to aid, I know.

Dr. Broyles, of Johnson City: I want to make a point of order. We can not do that. We can appropriate money.

President: That has had no second, and it is not in order for discussion.

Secretary: I want to say in regard to Dr. Tigert's suggestion that a great many have signified their willingness to make a voluntary contribution for this purpose. I do not believe that we can do a better thing than he has suggested, and I shall be glad to lend my personal aid and effort in securing contributions. We could, with the consent of the Board of Trustees, call this matter to the attention of our members through the Journal, and I believe Roane county will get the help they are looking for.

Dr. Tigert: I will put that suggestion in the form of a motion, viz: That the Secretary be empowered to solicit voluntary contributions from the members of the Tennessee State Medical Society, such contributions to be used, first, to assist the gentlemen in Roane county with reference to the expenses of this particular case, and that any funds that may be left over may be used in similar ways by other organizations in the state, at the discretion of the Secretary.

President: Pardon me for suggesting that there ought to be some kind of limitation attached to that. Suppose you receive a large sum in the event of contribution over the state. The Secretary ought to have some understanding about how much of this fund ought to be appropriated to "Buffalo Bill" and how much to hold back.

Dr. Savage: He stated in his motion, I think, "All that was necessary," and what? ever was left to be used otherwise.

Dr. Tigert: It being distinctly understood, of course, that we are not to spend more money than we have, or more than they need. I take it, gentlemen, that they will co-operate with us. I do not think we need to lay down any hard and fast lines about how many dollars.

Dr. Stevenson: It occurs to me we are about to set a bad precedent for this Association, in that we contribute to the prosecution of such men as this. What if this should become a kind of epidemic? What if we get him out of Roane county and into some other county, and that county has the same thing to do? It would bankrupt this Association in a little while, and it seems to me that we ought, as local societies, to be able to take care of such things in our own home counties in the state. But if we once get to contributing along this line, there are ninety counties in the state, and I think we could get into trouble soon.

Dr. Tigert: So far as the local county associations are concerned, this is merely a voluntary matter with them, and this does not exclude them from doing anything they may see fit. It simply means that we desire to aid these gentlemen who have been put to considerable expense about a matter that pertains to all of us personally. This is an injurious thing in the State. And this money is not going to be strewn around that the sparrows may carry it off. If it is not used, it can be left, for we are sure to need it some time. I do not see any reason why this is a bad precedent at all.

President: That is a voluntary fund that does not come out of our treasury.

Resolution carried.

Dr. Tigert: I move that the Nominating Committee be given the floor to report. We have a full attendance.

Seconded and carried.

Dr. Malone: Mr. President and Gentlemen, the Nominating Committee desires to report as follows: The president this year is to be selected from West Tennessee, and the following names are presented for president: Dr. F. C. Ellett, Memphis; Dr. W. F. Clary, Memphis—

Dr. Savage: Dr. Clary is a member of the House, and therefore ineligible to the office of vice president.

Dr. Malone: He was not present at the time we selected him, he wasn't a member of the House, but we will immediately rectify that.

Dr. Clary: It seems to me that the by-laws have been amply fulfilled there, and my

name has been put up before, but, as I am so strongly in favor of Dr. Ellett, I withdraw my name.

Dr. LeLoach: Can three men from the same county be nominated?

Secretary: There must be three of them.

Dr. Malone: Dr. Clary's nomination wasn't an error at the time.

President: It should not be now.

Dr. Dulaney: It is customary, where they nominate somebody that cannot qualify for the place, to nominate somebody from the House of Delegates after the election is entered into, so I should like to nominate Dr. Gourley, of Martin, in the place of Dr. Clary.

President: Is that regular?

Dr. Savage: The committee itself must bring in three. Then other nominations can be made.

Secretary: I suggest that is the best way out of it.

President: We should correct that mistake as quickly as possible.

(Nominating Committee retire to make correction).

President: I now call for the report of the Delegates to the A. M. A. Dr. Bromberg, we are ready for report.

Dr. Bromberg: The delegates to the American Medical Society from the Tennessee State Medical Society were Dr. Ellett, of Memphis, and myself. I beg to report that we were both present at the meeting in Atlantic City in June, 1914, and that we were in attendance upon each meeting of the House of Delegates. There was nothing of special interest to our State Society that was introduced before the House of Delegates that has not already been made familiar to the members of this body through the proceedings of the House of Delegates which were published in the Journal of the American Medical Society, a copy of which we have here, and it would be a waste of time to go over all of that data. I know of nothing particularly that would interest the body here present that was brought out at that time—certainly nothing that you are not already familiar with.

I will say that your Delegates were there on duty and constantly in attendance upon the House of Delegates. The President of the American Medical Society, Dr. Witherspoon,

presided with much credit and was warmly congratulated upon the manner of his presiding and his rulings, and Tennessee drew her share of the appointments of the House of Delegates, a former member of the House of Delegates of the Tennessee State Medical Society being appointed on the Judicial Council, who is now a member of the California Association—I refer to Dr. A. B. Cook. We also have a member of the Tennessee State Medical Association a member of the Council on Medical Education—I refer to Dr. W. D. Haggard. So I feel that Tennessee was fairly well represented in the national body.

I know of nothing else, Mr. President, that would be of interest.

This report was accepted and the committee thanked.

President: The Nominating Committee has returned and we are ready to receive its report.

Dr. Malone: The name of Dr. W. N. Gourley, of Martin, Tenn., has been substituted for Dr. Clary, as one of the three names submitted from which the president shall be selected, and the third name is that of Dr. L. J. Lindsey. For Vice President for West Tennessee, Dr. J. G. Price, Dyersburg; Middle Tennessee, Dr. R. E. L. Smith, Doyle; East Tennessee, Dr. Jos. W. Johnson, Chattanooga. For Secretary-Editor, Dr. Olin West, Nashville. For Treasurer and Trustee for three years, Dr. C. N. Cowden, Nashville. For Delegate to A. M. A. for two years, Dr. Jere L. Crook, Jackson, and for Alternate, Dr. J. McC. Hogshead, Chattanooga. For Councilors, Dr. S. R. Miller, Second District; Dr. W. Scott Farmer, Fourth District; Dr. J. F. Gallagher, Sixth District; Dr. A. B. Dancy, Eighth District; Dr. J. L. Andrews, Tenth District.

President: What is the method of disposing of the report of the Nominating Committee?

Secretary: To elect the president.

President: The first item in the election of the president, and a motion will be entertained.

Dr. Savage: To save time, I move you, sir, that the one receiving the smallest number of votes for president shall be dropped at the

end of this ballot, which means that we will have only two ballots.

Seconded and carried.

Dr. Crooks: If one man receives a majority, we will not have to have but one ballot.

President: This will be the rule: I appoint Dr. Broyles and Dr. Dulaney as tellers.

The vote for president was taken, and the result announced by the Secretary.

Secretary: Mr. President, Gentlemen, the vote for President results in Dr. E. C. Ellett, of Memphis, having received thirty-three votes for president, Dr. Gourley two, Dr. Lindsey one.

President: Dr. Ellett has received a large majority of the votes cast for president, and I declare him elected.

President: The next item of business is the election of vice presidents.

Dr. Tigert: I move that we accept the committee's report.

Secretary: I do not think that procedure is regular. I do not think we will have many ballots, Doctor, but we will have to take them one at a time.

Upon motion of Dr. Yarbrough nominations were closed and the Secretary instructed to cast the unanimous ballot for each of the three vice presidents, and Dr. J. G. Price, of Dyersburg, was elected Vice President for West Tennessee, Dr. R. E. L. Smith, of Doyle, Vice President for Middle Tennessee, Dr. Joseph W. Johnson, of Chattanooga, Vice President for East Tennessee.

Upon motion of Dr. Malone, the President cast the unanimous vote of the House of Delegates for Dr. Olin West for Secretary-Editor.

Dr. Gallagher: Mr. President, I rise to a point of order. I believe I am right in saying that the House of Delegates has no authority to elect a treasurer, and we had better do that regularly.

President: You are only called to vote upon the vice presidents and the secretary-editor. That has been voted upon. Now we will take up something else.

Secretary: Mr. President and Gentlemen, the next order, according to the report of the committee, is for the Treasurer and Trustee, Dr. C. N. Cowden. I would like to explain to the House, in explanation of Dr. Gallagher's point of order, that the chairman of the Board

of Trustees and the Treasurer are identical, and that the proper procedure, under the Constitution and By-laws, is to elect a Trustee, and that the Board of Trustees elect their chairman, who is ex-officio Treasurer of the Association. For this reason, Mr. President, I would suggest that we only elect Dr. Cowden Trustee, and then it is up to the Board of Trustees to elect their chairman. Then they can elect Dr. Cowden if they see fit, which I am sure they will do.

A Delegate: To serve two years?

Secretary: Serve three years. This irregularity, I will explain to you, arises from the fact that the proceeding last year was illy understood. Dr. Cowden was elected Treasurer under that misapprehension, and the only way in the world I know by which it can be corrected, inasmuch as the trustee's term expires this year, is for Dr. Cowden to now be elected Trustee.

Dr. DeLoach: I move that the Secretary cast the unanimous vote of the House of Delegates for Dr. Cowden as Trustee.

Dr. Miller: That question gave the Nominating Committee last year a great deal of trouble. According to the Constitution and By-laws there it appeared to the committee that we should have three trustees and a treasurer, and if the treasurer is, according to the Constitution and By-laws, the chairman of the Board of Trustees, now if we elect Dr. Cowden Trustee then we have got to elect a Treasurer, because it says clearly that we must elect a treasurer. The Constitution says that, and it is in the By-laws. So why not elect Dr. Cowden Treasurer of the Association, and then he is, according to that, a Trustee also, but we elect him Treasurer for only one year.

Secretary: I would like to state that the Constitution states that the Board of Trustees shall elect their own chairman, who shall be ex-officio Treasurer of the Association.

Dr. Bromberg: The section reads that all the officers of this Association, except the Treasurer, shall be elected by the House of Delegates on the morning of the last day of the annual session, but no delegate shall be eligible to offices except those of Trustees of the Journal and Councilor, and no person shall be elected to any office who is not in attendance at the annual session.

Dr. Gallagher: The next section.

Dr. Bromberg: The Board of Trustees of the Journal, composed of three members of this Association, elected as heretofore, shall select its own chairman, who shall be ex-officio Treasurer of this Association.

Question was then called for, and Dr. West, the Secretary, was instructed to cast the unanimous vote of the House of Delegates for Dr. C. N. Cowden as Trustee for the ensuing three years.

Secretary: It gives me very peculiar pleasure to cast the unanimous ballot of this body for Dr. C. N. Cowden as Trustee for the ensuing three years. I desire to say in this connection that this pleasure is "peculiar" by reason of the fact that Dr. Cowden has made a most efficient officer and has devoted his time and attention earnestly to the duties that have devolved upon him.

Dr. Savage: Has he been paid his salary?

Secretary: He drew his salary just about two weeks before the end of the year.

President: Next is the election of delegates to the A. M. A.

Dr. Malone: I move that the Secretary of the Association be instructed to cast the vote of the House of Delegates for Dr. J. L. Crook as delegate to the A. M. A. for two years.

Motion was seconded, prevailed, and the Secretary instructed to cast the vote.

Secretary: I also take peculiar pleasure in casting the vote of the House of Delegates for Dr. Crook as delegate.

The President then announced that Dr. Hogshead, of Chattanooga, was the nominee for the alternate delegate, and upon motion of Dr. Savage the Secretary was instructed to cast the unanimous ballot of the House of Delegates for Dr. Hogshead as alternate delegate to the A. M. A. for two years.

President: Next is the election of Councilors for two years—Second district, S. R. Miller; Fourth district, W. Scott Farmer; J. F. Gallagher for Sixth district, A. B. Dancy, Eighth district, and J. L. Andrews, of the Tenth, are the nominations.

On motion of Dr. Bromberg it was ordered that nominations be closed, and that the Secretary cast the unanimous ballot for Councilors for the men nominated for these various districts, which was done, and they were declared elected.

President: The selection of a place of meeting is now in order, and Knoxville is in nomination for this distinguished honor.

Dr. S. R. Miller: We will say that we certainly expect the Association to meet with us this next year, and we expect every man here to meet with us, and we expect him to go home and tell every man there that the latch-string is on the outside. We are sorry that we haven't the large accommodation there in hotels and meeting halls that are to be found in other cities, but we will arrange a suitable place, and we are sure you all will have quarters in the hotels. We have some more hotels that were not there when you were there last, and we want you all there. I would like to time of meeting had been moved up one week on account of the Mississippi Association, and it was an oversight this year, and we meet a week later, according to the constitution and hear from the Secretary here what the time of the meeting will be, as I understood the By-laws. We want to know, because it may be necessary for us to engage our quarters, halls, etc., some time ahead.

Dr. Savage: Mississippi meets a month later, in May.

President: That ought to be looked up and announced in the Journal. There is no use to waste time discussing it here.

Secretary: The time of the meeting is fixed by constitution for the first week in May. We met in the second week because the change was overlooked. After it had been published and announced I looked the matter up, and, finding that the time did not conflict, it was allowed to stand.

President: That fixes it, and it is unnecessary to consume time.

Dr. D. J. Roberts: I have had the pleasure of attending several meetings in Knoxville, and I can assure you we will make no mistake in going there.

Dr. Crook: I move that we accept this courteous invitation on the part of our Knoxville friends to honor them with our presence.

Seconded, and the Secretary instructed to cast the unanimous vote of the House of Delegates for Knoxville as the next place of meeting, which was done.

Secretary: I hereby cast everybody's vote for Knoxville, with a hip-hip-hooray!

Dr. Gillespie: I move that the Entertainment Committee be instructed to make no arrangements for entertainment for the next meeting.

President: What do you mean by entertainments? Do you mean the smoker, or anything of that kind?

Cries of "Kill it," "Kill it."

Dr. D. J. Roberts: It would be discourtesy, I think, to Knoxville to handicap them in any way.

Dr. Savage: I second the motion of Dr. Gillespie. We do not meet for hilarity or jollity, or anything else, but scientific work. I think the day will come, Mr. President, when we will all go at our work in these meetings seriously. The entertainments cost the home physicians enough to prosecute every quack in the county where it meets, and the money is wasted; worst of all, the time is wasted. But we are in a serious business, and we lose a whole night, whenever there is an entertainment, that might be profitably spent in the presentation of papers and discussions.

Dr. Miller: Dr. Savage made the same motion once before at Knoxville, and I talked my head off to show him that all work and no play makes Jack a dull boy. So I move that we lay Dr. Gillespie's motion on the table.

Seconded and carried.

Dr. Savage: I take pleasure, Mr. President, in recording a "No," and as soon as you go "dry" I will be with you and enjoy your pleasures with you, but as long as you have liquor I can not be there.

President: I take pleasure in announcing to the House of Delegates that there is one negative vote.

Secretary: The time is growing short, and we have one of the most important matters in the whole list to attend to—namely, action on the matter of medical defense.

President: We are ready to receive the report of the Council on Medical Defense that was deferred from yesterday.

Dr. Richards: The question of membership and jurisdiction of the county society, which was discussed by this body yesterday, and referred to the Council, has been carefully considered by the Council collectively, and by authority of chapter 7, section 3, of the By-laws, beg to report as follows:

The question of membership and jurisdiction of the county society, which was discussed by this body yesterday and referred to the Council, has been carefully considered by the Council collectively, and by authority of chapter 7, section 3, of the By-laws, beg to report as follows:

The questions of membership in organized counties are covered in chapter 11, sections 1 to 13 inclusive.

We further provide authority for physicians residing in counties in the State having no organized and affiliated society, that they may, with the consent of the Councilor of that district, apply for and be elected to membership in another county in this Association's jurisdiction.

When a society is organized and affiliated with this Association, the secretary of the new society shall notify the members in its jurisdiction, and the secretary and treasurer of member's adopted county society, and such members may be transferred to the roster of the new society as provided in chapter 11, section 8, but his membership in his non-resident society must automatically end with that calendar year, except as provided in chapter 11, section 9.

Concerning the membership of physicians in states other than their resident state, we request the delegates of this Association to bring the question before the House of Delegates or the Council of the American Medical Association at their next meeting and ask for a ruling covering fully the question of jurisdiction of state associations.

Upon motion of Dr. Crook, seconded, the report of the Council was received and adopted.

President: We will now take up the matter of medical defense which was postponed yesterday, and is in order for this time. It is a special order of business and requires no motion. What is the pleasure of the House of Delegates with reference to the report of the Committee on Medical Defense, as set for this hour?

Dr. Miller: I understood that there was an amendment to the By-laws offered.

Dr. Savage: Dr. McSwain's amendment.

Dr. Miller: But I have nothing further to say except that I hope that this body will not

consume an unnecessary amount of time. The committee has gone into the thing pretty thoroughly. This proposition I read from the insurance company, I have no reason in the world for desiring its acceptance, but they are willing to reduce the policies of physicians who are carrying physicians' liability at \$25.00 per policy to \$10.00 and \$7.00—\$7.00 is all that some of them will need. Let us say, however, that they take the full amount, \$10, they save \$15.00. Of this 604 members reported here, perhaps fifty or one hundred will take advantage of this, and there are some others that are ready to report now. Some money has been handed to me here, and of these 604 members there are probably 200, I believe I could say 300, who are carrying policies. Let us estimate that only 100 of that number will want to carry insurance in this particular company. I have no connection with the agent, I do not want this body to do anything more than to endorse that plan and recommend to the members that they affiliate with that company. I do not want them to bind them to do it, nor do I want them to have any connection with the committee more than to allow the committee to furnish the general agent of the company with the names of the people who are eligible, and accept this proposition of theirs. If only 100 members accept that, that will save \$1,500 to the members of this Association by that one thing alone. We believe it is worth our considering. I believe we should not take a step backwards. We might not have a single suit, and this question is going to draw the profession together better, it is going to make them very careful, and as I have said over and over and over again, it will be the work of this committee to find out why a suit is brought when it is brought, find out what doctor or what lawyer has said something that caused the plaintiff to file his suit against the doctor, and if that doctor has been hasty in trying to sue for a bill, or has been unethical, we want to point out to him his error, and if some other doctor, whether he be member or not a member, that has been the cause of this suit by some remark he has made, we want to find that out, and we want to let him know, too, all about what we think he has done.

We have had some instances in our county,

and I have had five or six of the principal attorneys there to say that they never expected to be guilty of bringing another suit—they had brought suit, but they never expected to be guilty again, because they have found out that doctors stand very close together, and there are two sides to a question always.

There are a lot of us that have agreed to go in and help out Dr. Zirkle with subscriptions of \$25.00, and there are a good many who would be glad to help out this time with subscriptions of \$25.00, and who would be glad to help out again in case necessity arose for it. And in the end this medical defense matter is not a question of a dollar or two fee. You all know—Dr. Savage knows—I was opposed to the Journal, but you all could not get me to abandon the Journal now for anything. Yet, as you all know, it was an experiment. (Applause). This thing will be just as popular when it is as old as the Journal. Don't expect it to run smoothly at the very first. This committee has laid awake at night; it has talked a great deal, talked and explained to individuals, and reasoned and argued with them, and converted some of them. Yet still there are counties that remain unconverted. In Hamilton county, one of the best societies we have in the state, only about sixteen paid in the fee. They voted against accepting this, yet I dare say there are fifteen men that are carrying physicians' liability policies, and if they find they can save \$15.00 apiece by taking a policy as a member of this Association, they will come so fast we won't be able to keep up with them. I have kept this part rather quiet, I have talked to Dr. Tigert and Dr. Crook and a few other individuals, and it is going to be increasingly difficult to procure physicians' liability insurance, because it is too hazardous. It is going to be more hazardous, and the insurance companies are going to increase the cost of these policies up to \$30.00 or even \$40.00 or \$50.00, because the profession is divided.

So I would advise that we not split up over this matter, but as long as we have \$1,600 in the treasury I do not believe we are going to exceed that, or even exhaust it. I do not believe we will exceed \$500.00 that you have placed at our disposal. I do not believe we will exceed our \$604.00 or \$700.00; and then

our general counsel will be familiar with matters medical, and if you want prosecuting attorneys after a while, you can combine the work discussed here with those attorneys. We already have \$550, \$300 for our counsel and the Medical Legislative Committee's work, and if we can get one good attorney and have him to handle these matters, I believe we can be a power after a while. (Applause).

Dr. Crook: Are we discussing the resolution that was laid over until today as to the increase of dues to \$3.00?

President: Yes, sir, that was the crucial question.

Dr. Crook: I endorse everything Dr. Miller has said as to the work to be done. The question is as to how best to do it. The committee is of the opinion that unless we get the entire membership to give \$1.00, the matter will be a failure. I do not want to be connected with anything that is a failure. I believe Dr. Miller has converted me to his idea that we ought not to make any compulsion about it. Should we place an unnecessary burden during these hard times by adding a dollar to the dues, it may weaken our membership. We believe this matter will justify itself if it has the time, and it is not so much the actual money paid in to be used for defense as the entente cordiale that will be fostered among the members of the profession, and which will discourage many jackleg lawyers and potential bringers of malpractice suits. The very fact that you say to a man who is threatening suit that he must fight 1,500 doctors all over the State, if that does not act as a deterrent he has no brains. The only thing that you can bring against doctors, and against the medical profession, is that they do not stand together. It is from enmity or lack of cordiality or carelessness that these malpractice suits originate, and they would never originate unless some doctor, either by omission or direct allusion, had given the patient something to base them on.

I say, let us go ahead and let this thing work itself out, and not add that burden to any member unless he wants it. Primarily it is for the interest of the man in the country, and when he finally sees it he will jump at it.

Dr. McSwain: I prefer to raise the dues rather than make the assessment. It amounts

to the same thing in dollars and cents, but there is a difference in the psychology of the thing. It is best to adopt the amendment if you are going to raise the dollar. Understand I am not insisting on the dollar being raised—I am only advocating the best method of doing it if it is to be done.

President: I have not been as much pleased with anything at this meeting as I have been with Dr. Crook's speech. That just meets my ideas exactly. I think it a dangerous experiment to try to force matters right now.

Dr. Malone: As I understand, the question before the House is the adoption of the amendment which was laid over from yesterday to make the dues of the State Society \$3.00. I move we table it.

Dr. McSwain: I withdraw the motion.

President: The amendment has been withdrawn.

Dr. Crook: I wish to make this suggestion along this line. We need a campaign of education all over the State in every single county—and we are trying to do it in our county. We get together regularly now every two weeks, and we have a year-book published a year ahead. We got the idea from Shelby county and from Nashville—they are the leaders in this line. Now if we can each, when we go home, or if the Secretary can be instructed, to write a personal letter to each county society, stressing the necessity of getting together to resist the encroachments of those who get together to attack us, why I think our Medical Defense matter will soon be looking up.

Dr. Reagor: I think Dr. Crook is right in this matter. We can not have but fourteen to take medical defense out of a membership of twenty. But just wait until there is a suit or two brought, and especially one out in the country. I know of a little cloud on the horizon now. That is what is going to make us wake up and take notice. But if we should not, I for one, will be ready to go down in my pocket individually and help any man (applause), and I think every one of us will do it. I say, just let it go, and let's move along gently with these men that are pulling back on the traces, and I think at the end of sufficient time we will have all we want.

President: This matter seems to be disposed of.

Dr. Miller: I would like to see what the House thinks of having the Secretary write to the secretaries of the county societies urging their members to avail themselves of this medical defense. It might do some good.

Dr. Tigert: These men out here in the country think we are trying to push them into something. We ought to let them alone. The best way is to let them alone and let it simmer longer.

Dr. Bromberg: I move you, sir, that the committee's report be received, and that the same Medical Defense Committee be continued. Seconded.

President: That is what we wanted you to say. It is moved that the committee be continued, and in that connection I just feel like complimenting this committee on the most excellent work it has done for the past year. It has been burdensome, it has not been simple, but it has not been simply that they have been industrious fellows, they have done very intelligent work.

Report of the committee accepted, and the committee thanked.

Dr. Miller: I would like to have some consideration paid the proposition of the insurance company. Shall we accept the committee's report, and recommend that our members avail themselves of opportunity offered by this insurance company?

Dr. Tigert: I move that we do not do that now. We do not want to get tied up with any insurance company of any kind. I think that we have this matter disposed of.

Dr. Savage: Let Dr. Miller name the insurance company, and we can all do as we please.

Dr. Miller: I read the letter. It is the Georgia Casualty Company, Macon, Ga., a Southern company, and I will say this, before any information is given out, we will investigate it very carefully in the state capitol. I know this, in the automobile liability insurance they have been the most ready and most careful people, have the most careful attorneys, as well as agents, in adjusting automobile claims. I have not had any, but I have had opportunity to see several of them, and some death claims. I want to say to Dr.

Tigert that in recommending this we do not obligate ourselves in any way, and it does not necessitate any man taking it unless he wants it, but it accepts their proposition in that we can get insurance for \$10 that otherwise costs \$15 or \$25 now.

Dr. Yarbrough: Why can't we have an editorial comment on that, and then every man can take advantage of it if he so desires.

Dr. Gillespie: Let every man insure where he pleases, but simply let the Journal state these facts.

President: Let the Journal put it in the form of an advertisement, and have it paid for by the company. We will now have the report of the Auditing Committee.

Dr. Malone: The Auditing Committee has examined the report of the Secretary and of the Treasurer, and find same correct; it has been audited and marked correct by the committee, Dr. McCabe, Chairman, Dr. Zirkle and myself.

Upon motion of Dr. Bromberg the report was received, and the committee thanked and discharged.

President: Now we are ready for the report of the Board of Trustees.

Dr. Malone: It is ten o'clock, and I understood Dr. Finney's address would be made a special order at ten.

Secretary: That will be arranged to suit the convenience of the House of Delegates. We will all hear Dr. Finney's address—you need not be uneasy about that.

Dr. Dulaney: I move you that 11:30 be the time for the report of the Committee on Nominations; also in my motion I would like to include this, that the report be made on the officers that will be elected from the Section of Ophthalmology and Oto-Laryngology.

Motion prevailed.

Dr. Savage: While we wait for their report I want to speak a word for the good of the order. We are accustomed either to throw bricks or bouquets at our public servants. While a brick or two has been thrown at my friend, the Editor of our Journal during the year, I have heard nothing but bouquets. I have read something about the bricks, but I will tell you I am proud of the wet nurse in charge of my baby the Journal. I want him to keep on giving it the same nourishment, the same kind that he has been giving it during the past year, and I want all of us to

stand by him and have our bouquets ready to throw, our bricks behind us. (Applause, and cries of "Speech.")

Secretary: Mr. Chairman and gentlemen, I of course very deeply appreciate the sentiment that is expressed. There have been times during the past twelve months when the bricks were pretty well distributed through the atmosphere. When the efforts of the Secretary were being made to secure reports and to bring about improvements of various sorts, and not much response was received, there have been times when I felt somewhat like an old negro from Alabama, as our distinguished friend, Dr. Price, would say, who had weathered a tremendously hard winter. He just came through by the hardest, and the next July, when the sun was extremely hot and beating down upon his back as he was digging a trench in the field, he suddenly ceased his labor, raised up, and looked at the sun, and said: "Where in the hell was you at last February?" Mr. President, the inspirations, the expressions of kindly sympathy and friendliness and commendation and encouragement that I have received at this meeting make me forget "last February."

I want to say, gentlemen, too, that I have been exceedingly proud of this meeting of the Association. I am proud of the fact that I have lived to see the day when a man from Memphis could applaud Frank Billings when he announced that buttermilk had been substituted for beer in Chicago. (Laughter.) I saw that thing happen last night, gentlemen, when Dr. Burns applauded that sentiment before us. (Laughter.) In all seriousness, gentlemen, I do want to say that the bricks that have been received were absolutely insignificant in the light of the developments since they were received, and I do sincerely appreciate the wonderful co-operation and support that have come to me in my efforts to do whatever I could do in behalf of this Association.

Dr. Cowden: The Board of Trustees is not ready to make a report in full, but we have one matter that we want to offer you as a recommendation, and that is, that the salary of our Secretary be raised to one thousand dollars a year.

Dr. Malone: I second that motion.

Dr. Cowden: It was unanimously passed at the meeting we held last night that our Secretary's salary should be raised to \$1,000 a year.

Secretary: Gentlemen, you must hear me on that.

Dr. Savage: It is a bouquet, and he is dodging from it. It is a bouquet, not a brick. Sit down.

Secretary: I must be heard on that question. That is a very great compliment, and of course I appreciate it, but as a matter of fact, I do not believe that it is a wise procedure to increase the salary of the Secretary at this time. The matter was mentioned to me last night, and I thought about it a good deal between eleven o'clock last night and daylight this morning, and I don't believe it is a wise thing to do. If we are going to improve the Journal, and if we meet the cost of the activities which this Association ought to engage in, you are not going to have any money to pay the Secretary a thousand dollars a year. I am entirely satisfied to do what I can on the present salary, and we are going to need that money, and, in all sincerity, I would object most strenuously to the increase of the salary of the Secretary.

Dr. Miller: I rise to a point of order. I read here from Article 9, Section 1: "The Board of Trustees shall make all expenditure of the funds of this Association and render an annual report of the full detailed account of the receipts and disbursements." It seems to me that this matter is a matter with the Board of Trustees, and does not come before this body.

Dr. Cowden: It was unanimously passed yesterday afternoon that his salary be for next year \$1,000.

President: This is not a question for the House of Delegates at all.

Dr. Malone: I move that this House of Delegates endorse the action of the Board of Trustees in fixing the salary of the Secretary-Editor.

Seconded and carried.

President: It stands endorsed.

Dr. Miller: I move you that we adjourn till 2 o'clock.

Seconded and carried.

Afternoon Session.

Thursday, April 15, 1915, 2 P. M.

The House of Delegates called to order by the Secretary. It was moved, without objection, that Dr. Savage take the chair, as the Presidents and Vice Presidents were not present.

Chairman: We will now have the report of the Board of Trustees.

Dr. C. N. Cowden: I haven't much of a report. We met in Memphis, and decided upon a plan to be pursued, we put the plan in Dr. West's hands, and he has carried it out. We made a plan to get bids for the Journal, and everything of that kind, and the business has been carried on upon that foundation, and all bills have been met.

The Journal had rather a stormy time, how-

ever, a few months ago that some of you didn't know about, but it got through. We had money to pay it out every time, and so far as we know, the business end of the Association is on a very firm foundation. We have, perhaps, a little bit more money this year than we had at this time last year, and we have several other bills that will be coming in. The outlook for the Journal is better than it ever has been before. Our outlook for patronage in the advertising department of the Journal is much better now than last September, when we went through the very worst depression I suppose it will ever have to face. Our patronage went down a good deal. Everybody was retrenching, and the retrenchment seemed first to hit the Journal's advertising, but they are coming back, and we hope to get more patronage this year from the advertising department than heretofore. We feel that the outlook for the Journal from a financial standpoint will be all right for the next twelve months.

The only thing of moment we did was to increase the salary of our Secretary to a thousand dollars, which you ratified this morning. That was a unanimous thing, and everybody at the meeting, all three of the men, were trying to introduce the resolution at once. I believe that is about the only report the Trustees have to offer.

Dr. Tigert: I move you that the report be accepted.

Seconded, and the report adopted.

Chairman: Anything else to come before the body? Mr. Secretary, have we overlooked anything?

Secretary: So far as I know, this completes the business which is to come before the body. There were some matters that were handed in in an unfinished sort of condition. I can neither make heads nor tails of them, and as nobody has ever seemed to assume any responsibility for them, I cannot present them to you in an intelligent fashion.

The Chairman of the Legislative Committee has a proposition which he asks me to state, and that is, that this body direct the Secretary to write to the gentlemen who were so active in assisting in the passage of the Medical Practise Act, and thank them for their support in behalf of that measure. I shall be delighted to do that. These are members of the legislature.

Chairman: That is the courteous thing to do. Will you so direct?

Upon motion of Dr. Reagor, the Secretary was instructed to write the letters.

Secretary: So far as I know, there is nothing else to come before the House.

Upon motion of Dr. Tigert, the House of Delegates adjourned.



E. C. ELLETT, M. D.
MEMPHIS

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EDITORIALS

THE NASHVILLE MEETING.

A number of the members of the Association have expressed themselves as regarding the recent meeting at Nashville the very best in many years. Some others have complained that certain mistakes were made which seriously detracted from the profit and pleasure that might otherwise have been had by them. The Secretary, who was responsible for practically everything except the arrangements, which were made by a local committee on arrangements, is glad that so many were pleased and sorry that any were displeased. It was our first attempt at the job and we hope to do better next time.

The registration was larger than in 1914, but not quite up to 1913. There were a number of gentlemen there, however, who did not trouble themselves to record their presence.

The hall in which the general sessions were held is not well suited for such meetings. It was the best available, though, and so this could not be helped. It would be a fine thing for the Association to have a building of its own, arranged as would best suit the purposes of the society.

It was a sore disappointment to all concerned that the reduced rate on railroads could not be secured. Had there been about forty additional tickets the rate would have been had.

The program was too long. Here is where complaints came thick. Some of our fellows spoke out loud about the number of papers and the arrangement of the program. This has come to us since the meeting—generally through third persons. Did ever you undertake to get up a program? If not, please permit us to inform you that a program is the hardest thing to start that ever you tackled.

Also permit us to further inform you that it is much harder to stop than to start. When the original program was ready for the printer it contained forty-eight papers. When the finished article came out there were sixty-two papers listed and we had in hand twelve subjects submitted by members who wrote too late to have them added. Some of the kind gentlemen who waited until the very last second of the last minute are now roasting us for not getting them on. All of which goes to prove that making a program to suit everybody is an impossible task. However it may have been, we are very sure that we had papers read at this last meeting that will not be excelled at any state meeting in the land.

There is no difference of opinion as to the value of the contributions made by invited guests. All are agreed that Doctors Trask, Billings, Rosenow, Finney and White gave the Association instruction that was helpful, and that their presence added very materially to the general success of the meeting.

The House of Delegates transacted business with dispatch and there was no "politics" in evidence.

Every section of the state was well represented and there was at least one doctor in attendance from nearly every organized county.

We believe the 1915 meeting was worth while. It's behind us now and our pegs are set for a better one in 1916 at Knoxville.

THE RETIRING PRESIDENT.

Dr. S. M. Miller, who has just retired from the Presidency of our Association, after a year of distinguished service, endeared himself to many new friends by his courteous kindness in the chair throughout the recent meeting. A great many who had not heretofore enjoyed a close acquaintance with Dr. Miller took advantage of the opportunities afforded at Nashville to become better acquainted and were charmed with the gentleness and heart of the man. To know S. M. Miller is to love him; to linger in his presence is to receive a blessing; to have his friendship is to hold precious treasure. He is a man who has gone through long years doing good, never boasting, never asking,

but always modestly helping and generously giving.

As President of the Tennessee State Medical Association, Dr. Miller was true to every trust. No detail was too slight to receive his prompt and earnest attention. He dignified his office and set an example which will stimulate others to unselfish effort and better service.

May the richest blessings descend upon our respected and revered fellow!

GOVERNOR RYE APPOINTS BOARD.

Appointments to positions on the Board of Preliminary Examiners have been made by Governor Rye.

Professor Irby Hudson, of the Nashville High School, will fill the six-year term on the new board, while Professor C. C. English, of Bristol, will serve for four years, and Professor J. W. S. Rhea, of Memphis, was appointed for the two-year term. All of these gentlemen are prominent in educational circles in their respective sections of the state and are known to be capable and progressive men.

This board will be an instrument through which a great deal will be done for elevating the standards of medical practice in Tennessee. The Journal congratulates the appointees upon being chosen to places which offer such fine opportunities for public service. We are sure that the physicians of the state will lend their hearty co-operation and will uphold the Board of Preliminary Examiners in the administration of the law.

THE "INDIAN DOCTOR" RUNS UP AGAINST A REAL COURT.

If the Kingston faker, known to fame as the "Indian Doctor" and known to fact as an African fraud, desires to continue his practice of diagnosing "buncum carbitis" and selling his mysterious concoctions for the relief of this condition which none but he has ever encountered, he must stand trial and show that there is merit in his "system." Chancellor H. G. Kyle has twice refused to dissolve the injunction issued against the ebony-hued "Indian," once on March 4 at Kingston, and again on March 29 at Knoxville. The Chancellor also refused, as we are

informed, to modify the injunction. Consequently, the chambers and passages of the imposing structure erected by the Ethiopian wonder at Kingston are now in the state that characterized the classic halls of a castle of old made famous in song and story. Silent they are, their glory departed, and all beds empty. No special trains are meandering up and down the Tennessee Central and the Kingston pike can now be used by pedestrians without danger of being run down by Chattanooga automobiles.

With an array of legal talent numerically as strong as the average billion dollar monopoly would feel called upon to support, the I. D. hied himself to Knoxville and appeared before Chancellor Kyle. His attorneys argued and plead. Against them appeared a young lawyer whose name is B. H. Littleton. When it was all over it was just as before it all started. Mr. I. D. stood enjoined, the law of the state was upheld, and the activities of one more quack had been summarily suspended.

It all goes to show that a persistent effort to secure protection for the people against quacks and frauds at the hands of our courts will meet with success. The law is clear and just. It may be that the right court will not be found at first, and it certainly will be that the quacks will put up a stiff fight, but a manly, persistent effort like that of Attorney Littleton in the case of the "Indian Doctor" will finally win. And it goes to show, too, that the responsibility of prosecuting and convicting the transgressors of our medical laws needs to be definitely placed upon some one who will attend to this duty, who will see to it that convictions stick, and that penalties are enforced.

A DOUBLE-BARRELED YEAR.

Our fiscal year is supposed to be identical with the calendar year, but because of the action of the House of Delegates which allows members until April 1st to pay dues, we are compelled to keep books and make reports for one year which ends at two different dates. On December 31, 1914, there were 1,444 members enrolled as of 1914. On April 1, 1915, there were 1,200 members who

had paid 1915 dues, most of whom were 1914 members. Dues for 1915 will continue to come in until December 31, and even after that date, and they will come from the same men who have pursued like dilatory methods for years. Why? Just because it is as natural for some men to defer until tomorrow what they can easily do today as it is for a cow to chew her cud. Rarely a cow will "lose her cud." Just as rarely these men who put off the payment of dues put it off for any really good reason.

This delayed payment of dues works a hardship on the County Secretary, makes a lot of unnecessary work in the office of the State Secretary, and leads to confusion and error. The County Secretary has to make two or three, or sometimes a dozen reports, instead of the one that should be the only one necessary except for new members. The mailing list of the Journal has to be unmade and made over and added to all along during the year. Whenever the amount of book-keeping is increased there is a corresponding increased chance for error.

It is business-like to pay your dues when due, it can't hurt you to pay at the right time, and it will make it easy for the business of your county society and the State Association to be cared for in a business-like way.

If you have not paid 1915 dues, do it now, and promise yourself that you will pay 1916 dues in December of this year. Get ahead once and then stay ahead forever.

STATE BOARD OF EXAMINERS FOR NURSES.

Doctors Y. W. Haley, Nashville, J. D. Brewer, Newbern, and Reece Patterson, Knoxville, Miss Nell Dougherty, Nashville, and Miss Katherine Schulkin, Memphis, will constitute the State Board of Examiners for Nurses. These appointments were recently announced by Governor Rye.

OUR 1915 PRESIDENT.

Dr. E. C. Ellett was born in Memphis on the eighteenth day of December, 1869. His father, Judge H. T. Ellett, rendered distinguished service to the States of Mississippi and

Tennessee, to the Confederate States of America, and to the United States. Judge Ellett was at various times in his career Postmaster-General, C. S. A., a member of Congress, Justice of the Supreme Court of Mississippi, and Chancellor of Shelby County. Practically his entire life was spent in public service.

Dr. Ellett received his literary training at Southwestern Presbyterian University at Clarksville, and at the University of the South, at Sewanee. He graduated in medicine with honor in the class of 1891 at the University of Pennsylvania, receiving the alumni medal for having made the best average for the entire course. After graduation Dr. Ellett served one year as Resident Physician in St. Agnes Hospital and one year as House Surgeon in Wills' Eye Hospital. He then returned to Memphis and entered into the practice of his chosen specialty.

Dr. Ellett has never aspired to political position. He has been repeatedly honored by the professional societies in which he has held membership, and has rendered valuable public service through the work he has done for popular education relative to the prevention of blindness. He has served his local medical society as president, his state association as delegate to the A. M. A., and as chairman of important working committees, and has repeatedly received important assignments in the Southern Medical Association and in the American Medical Association.

As Dean of the College of Physicians and Surgeons, and later as Dean of the College of Medicine of the University of Tennessee and as Professor of Ophthalmology, which latter position he now holds, Dr. Ellett has rendered valuable service to the cause of medical education. In addition to his college training, our new President has done a great deal for ophthalmology by his contributions to standard text-books, notably, Posey and Wright's "Diseases of the Eye, Nose, Throat and Ear," Woods' "System of Ophthalmic Operations," and the "American Encyclopedia of Ophthalmology."

Dr. Ellett is "an organization man." He is a member of his county and state societies, a fellow of the American Academy of Ophthal-

mology and Oto-Laryngology, a fellow of the American Ophthalmological Society, a fellow of the American College of Surgeons, an active worker in the Southern Medical Association and in the American Medical Association.

Dr. Ellett enjoys a most extensive practice, having accomplished the task of rising to the very top in his native city. He is a plain, modest, unassuming gentleman and an untiring worker. Rarely has a man been chosen to lead the Tennessee State Medical Association with such unanimous and enthusiastic support. His Shelby county associates, and everybody else, were outspokenly for Ellett. The honor was worthily bestowed and the charge will be faithfully and efficiently administered.

THE NEW LAW.

Tennessee, so long the black spot on all maps illustrating conditions of control of medical licensure, has been redeemed, if the enactment of a progressive law can redeem her. She has taken the very foremost place in the ranks by reason of the passage of an act which requires that all who apply for license to treat disease in this state shall furnish evidence of proper educational qualification, literary and professional.

It will be necessary, under the provisions of this new law, for all who desire to apply for license from the state to treat disease to first convince a Board of Preliminary Examiners that they are qualified by educational preparation. A high school diploma, or its equivalent, and a diploma from a reputable professional school which gives an adequate course of instruction extending over four years of eight months each must be held by all applicants for license and must be approved by the Board of Preliminary Examiners before such applicants can go before the various boards of examiners heretofore established. The full text of the new law will be published in the Journal.

The Committee on Public Policy and Legislation of the Tennessee Medical Association, Drs. W. M. McCabe, H. M. Tigert, and W. C. Dixon, are entitled to great praise and have earned the gratitude of the medical profession and of the people of this state for the splendid work they have done which has resulted

in the enactment of the most progressive medical law that has ever become law. These three gentlemen worked night and day for weeks and sacrificed their own personal interests absolutely. While it is true that they were accorded most valuable support from doctors and others in every section of the state, it remains a fact that their personal effort was what put the thing over.

The vote in the House on the bill which was passed was 58 to 26. One doctor in the House, a member from one of the largest counties voted "No," but his vote had against it the four votes of the other medical men who are members of the House. Dr. Hawk, a member of the Sullivan County Medical Society, with Representatives Stewart, Shropshire, Ward and Elkins, made the fight in the House. Each of these gentlemen made dispassionate and intelligent speeches for the bill, effectively disposing of the opposition. The opposition, by the way, was very noisy but not otherwise distinguished.

In the Senate only one unfavorable vote was registered and that was cast by a man who was heartily in favor of the spirit of the bill. His vote was changed to make an unanimous action by the Senate. In this body Senators Worley and Parkes, the latter a member of the Fayette County Medical Society, made calm, sensible statements to the Senate, in which they set forth valid reasons why the bill should be passed.

Governor Rye promptly affixed his signature when the bill was transmitted to him, and House Bill No. 726 become law.

One of the most gratifying developments of the campaign for the passage of the law was found in the fact that the Governor of the state, and most of the members of the Legislature, fully realized that the measure was designed for public protection and not to serve selfish interests.

The Journal most heartily commends the Legislative Committee, Drs. McCabe, Tigert and Dixon, for their untiring and unselfish work. To Senators Worley and Parkes, and to Representatives Hawk, Stewart, Shropshire, Ward and Elkins we would make grateful acknowledgment, in behalf of the Tennessee State Medical Association, for the earnest and intelligent effort which they put forth to se-

cure the passage of House Bill No. 726. To Governor Rye, who signed the bill and who will appoint the board to be created, and to all members of our Legislature who by vote and in other ways helped to put Tennessee in the lead with regard to state control of medical licensure, we would also convey an expression of gratitude and congratulate them upon the progressive stand they assumed and maintained in this matter.

OUR PHYSICIANS' DIRECTORY.

For two or three years the Journal has carried in the advertising pages the professional cards of a number of our members. A few have objected to this feature and no solicitation has been made for patronage for these columns. At the Nashville meeting the House of Delegates was asked for an expression as to the propriety and advisability of continuing the "Physicians' Directory." It seemed to be the unanimous opinion of the House of Delegates that the "Directory" should be continued. We therefore solicit your card, to be inserted in the next twelve numbers of the Journal for five dollars. Some of the state journals have several pages of these modest announcements and the income derived from them is of considerable help. We hope that our members will respond generously to this appeal.

IN OUR OWN HOUSEHOLD!

The making and selling of secret patent medicines, their advertisement as being capable of producing results which they do not and cannot produce, the charging of prices for them that yield their makers most exorbitant profits, the blatant using of these profits to curry public favor, the publishing of indecent suggestion in connection with their advertisement—all this and other practice of the producers of these patent medicines is either right or it is wrong. If it is not wrong, our national government officials, our congress, our most influential newspapers and magazines, our scientific men are all fools. If there is any set of men in all the world who know better than any others that the methods of manufacturers of this stuff, their fraudulent claims for their products and their

unscrupulous imposition upon the public, is all wrong, those men are doctors.

The manufacturer and seller either knows he is guilty of wrongdoing or he is an individual so deluded that he should be confined. If he does know right from wrong and persists in doing wrong, he should not receive commendation in any way from men who hold membership in the Tennessee State Medical Association. If he does not know right from wrong, he most certainly should not expect nor seek their endorsement.

Some months ago one of the component societies of the Tennessee State Medical Association, after two trials, adopted resolutions commending the Journal of the American Medical Association for the fight that was being waged against patent medicines, and condemning a certain nostrum of local origin. It appears, from a statement in a newspaper published in the city where this medical society has its weekly meetings, that some more resolutions were brought before the society on the evening of April 16th. It was set forth, so the newspaper account states, that the former action of the society might have been construed as a reflection upon the manufacturer of the patent medicine which was named in the resolutions adopted some months ago. Regret was expressed over the possibility of such construction, and this new document "declared that such was not the intention of any action taken by the organization, but to the contrary the medical society held" the patent medicine maker "in highest regard and recognized, as did —'s entire citizenship, his sterling worth and public-spiritedness." Quoted further, "the text was not available to reporters, who made diligent effort to get a copy. A complete list of the names attached to the resolution was also denied the newspaper representatives, but ethics failed to put a perfect seal on the proceedings. It was learned that among those petitioning their brethren to let their voice join in the general chorus of praise for" Mr. patent medicine man were—and then follows a list of fifteen names of physicians. Among those named as subscribers and petitioners who belong to "the chorus" are: a recently elected Vice President of the Tennessee State Medical Association and a Censor in his local

society; a man recently named as alternate for a delegate from the Tennessee State Medical Association to the American Medical Association; two fellows of the American College of Surgeons; two men who have behind them a long record of connection with public health work in Tennessee. Incidentally, surgeons are in the majority among the "petitioners," and also, incidentally, the resolutions were not presented until after the Tennessee State Medical Association had held its annual meeting.

The patent medicine man whom it is sought to glorify in these resolutions is the maker of a pernicious concoction which has been exposed, along with the methods of the manufacturer by the Journal of the American Medical Association. He has brought suit against the Journal for \$300,000 and has had his agents out over the country engaging doctors to give "testimony." The favorite trick of his kind is to spend lots of money and establish, if possible, a reputation for "sterling worth and public-spiritedness." Of course, he reckons that if he can get statements from individual members of the Tennessee State Medical Society, who are also members of the A. M. A., intimating that he is a paragon of virtue and a regular vitalized chunk of "public-spiritedness," these statements will help with a jury. If he can get resolutions to this effect adopted by a regularly organized medical society which is a unit of the A. M. A., then indeed will he be gleeful.

We utterly fail to understand how it can be possible to separate a man's business character from his personal character, or how these doctors who signed the resolution above referred to can endorse the man without endorsing the business he is engaged in and without slapping the best element of American medicine squarely in the face.

We take great pleasure in recording the fact that "the brethren" petitioned by members of "the chorus" had one voice, as the reporter accredited them. It was not added to "the chorus," however. In fact, the voice of "the brethren" was raised in such stentorian tones of unmistakable opposition to the resolutions that "the chorus" was tem-

porarily put out of business. The voice proclaimed that "the brethren" stood right where they stood at first—on a platform of no compromise and no consolation for patent medicines and the makers of them.

We hope that the song of "the brethren" was set to the tune "Old Hundred," and that the doxology has been finally sung on all attempts to influence any organized unit of organized medicine in Tennessee to commend or commiserate any concern or any man who tries to foist a pernicious secret nostrum on the public.

Praise God for "the brethren"! They may not hold positions of any great prominence and they may not be authorized to dangle any long system of hieroglyphics after their signatures, but they know when "the chorus" is out of tune, and they are not afraid nor ashamed to raise "their voice" in singing the songs of medical Zion. They can always be depended upon to render a piece that is sadly discordant to fake medicine makers and their supporters, but which is sweet music to all who sincerely believe in the justice of the cause of those who contend for public protection against secret nostrums for which unwarranted claims are made. Soon or later, "the brethren," in a burst of righteous melody that will be heard wherever civilization has advanced, will drown "the chorus" into everlasting silence. Grant it be soon!

The Journal desires to state, for the benefit of the world at large, that the Tennessee State Medical Association stands squarely and everlastingly with the Journal of the American Medical Association in its fight against all patent medicine fakery—in Tennessee and out of it. Our members who have gone over to the patent medicine "chorus" are in a little minority and will receive scant comfort from "the brethren."

A REGISTRY FOR NURSES.

An official registry for nurses of Middle Tennessee, with Miss Annie Sanders as Registrar, has been established. Physicians wishing to secure either graduate or practical nurses should call Walnut 982, Nashville. All calls, day or night, will receive prompt attention. We are very sure that the doctors who depend

upon Nashville for nurses will be appreciative for the service of the nurses' registry. An announcement is carried in the Physicians' Directory in the Journal.

News Notes and Comment

We know a fellow who prides himself on his "individualistic traits." Every jackass and every billygoat exhibits the same traits.

What did **you** do for your county society last year? What are you going to do this year? You owe something to the society, in one way or another.

Well, here we go—on a new lap. Let's all tighten up a little, put on a slittle more speed and make some more records. We know where the eighth and quarter posts are now and can measure our stride and time the finish spurt better than ever before.

It's hard to tell which is the worse bore, Dr. Damn Everthing Grouch or Dr. Gladhand Everlasting Grin. You can grin Dr. Grouch into temporary inactivity, but you can't grouch Dr. Grin into anything.

Dr. E. M. Holmes, of Murfreesboro, returned in April from Baltimore after two or three weeks at Johns Hopkins Hospital. Dr. Holmes received encouragement from the distinguished physicians of the Hopkins service, and his numerous friends are earnestly hopeful that he will soon recover entirely from the condition which has interfered with his usual active life for several months.

Dr. Charles S. Stephenson, a member of the Hickman County Medical Society, has had his Journal address changed to Cavite, Philippine Islands. Dr. Stephenson is now Assistant Surgeon in the U. S. Navy and has been in the Philippines since completing his course in Navy Medical School at Washington and in the Naval Hospital in New York.

Announcement has been made by Dr. S. T. Rucker, Director of Lynnhurst Sanitarium,

Memphis, of the completion of the new buildings erected to increase the service of this deservedly popular institution. Lynnhurst is in the suburbs of Memphis, the sanitarium being surrounded by about thirty acres of woodland. The new buildings are strictly modern and the institution is thoroughly equipped with all that is necessary for the application of approved methods of treatment for nervous diseases, mild mental disorders, and opium addiction. The Journal congratulates Dr. Rucker on his enterprise and progressiveness and extends good wishes for the success of the new Lynnhurst.

The Knox County Medical Society has furnished three surgeons to war hospitals in Europe. Dr. C. A. Snoddy is serving in Austria, Dr. R. H. Newman in Germany, and Dr. G. H. Hodge in Serbia. Dr. Hodge succumbed temporarily to typhus fever, which is raging in Serbia, but late accounts state that he is again ready for active duty.

Dr. R. M. Kirby-Smith, of Sewanee, is fighting typhus fever in Serbia. News reports are to the effect that Dr. Kirby-Smith is rendering heroic service, there being a shortage of doctors and an overplus of typhus fever.

There are in Tennessee, under direction of members of the Tennessee State Medical Association, well appointed institutions for the treatment of nervous and mental diseases and drug addiction. Every one of them has new buildings and new equipment and the medical directors are all competent men. These facts should be held in mind by our members. If you have patients needing institutional treatment, give our own private hospitals first consideration. If there is any good reason for sending a patient out of the state, send him to one of the institutions whose announcements you will find in our advertising pages.

Dr. W. D. Horton, whose name appeared as a member of the Nashville Medical Society in 1865, has taken up temporary residence in Nashville. Dr. Horton has, for a number of years, made his home in Europe. He finds

few of the professional friends of his younger days yet alive in Nashville, practically all of those whose names were enrolled as members of the medical organization of 1865 having been dead for a number of years. Dr. J. D. Plunket and Dr. J. R. Harvell, as far as we know, are the only physicians now living in Nashville who were in practice in 1865.

Dr. F. L. Watkins, Registrar of Vital Statistics in Mississippi and representative of the Bureau of the Census at Washington, was a visitor at the office of the State Board of Health in Nashville in April. Dr. Watkins was greatly pleased with the progress that has been made in securing valuable registration data in Tennessee.

The Abbott Alkaloidal Company have published a very complete and convenient record book for keeping record of narcotics dispensed in daily practice. The price of this valuable little volume is only twenty-five cents.

Dr. W. K. Sheddan, of Columbia, a member of the Maury County Medical Society and one of the most widely known physicians of the state, was in constant attendance upon the sessions of the Association at the Nashville meeting.

Dr. W. B. Russell sent greetings to the members of the State Association from his post in the Methodist Hospital at Soochow, China.

One of the most delightful personalities at the Nashville meeting was to be found in a distinguished visitor, Senior Surgeon Joseph H. White, of the U. S. P. H. Service. From this time on we shall claim Dr. White as our own. He is located in Memphis and is in charge of the new Marine Hospital there.

Memphis was at the meeting in force. A fine set of fellows, wide awake, sociable and courteous, they made many friends and added a great deal to the success of the meeting in every way.

Miss Alice McEwen, a nurse most favorably known to the medical profession in Middle

Tennessee, has returned from a course of study in New York and is now prepared to take patients requiring Swedish massage.

The Goetz Sanitarium at Knoxville announces the affiliation of Dr. Reinhard Roerig as house physician of the institution.

Dr. S. S. Marchbanks, of Sparta, has been prosecuting his studies in New York since December 1, 1914. Dr. Marchbanks is now serving as intern in the Skin and Cancer Hospital.

Dr. Amzi Jones, of New York, is visiting at the home of his mother in Rutherford County. Dr. Jones has been in poor health for several months and will spend some time in Tennessee, believing that our sunshine and good air will help to make him well and strong again.

Dr. John W. Hanner, U. S. Army, recently paid a visit to the home of his father, Dr. J. P. Hanner, at Franklin. "Jack" Hanner is one of the several young men that Tennessee has given to the medical service of our army in late years. He has served in many fields, always with credit to his profession and to himself.

Dr. L. W. Edwards, Nashville, has been made Prison Physician at the main prison, located in West Nashville. The Board of Control paid Dr. Edwards a very high compliment in selecting him for this position from a rather large list of competent men whose names had been submitted to them. Dr. Edwards has entered with enthusiasm into his new work and has been given assurance that he will be accorded generous support to the end that the health of the prison inmates shall be better conserved.

If you want reprints of your papers appearing in the Journal communicate with the Rich Printing Company, 172 Second Avenue, N., Nashville.

The House of Delegates at the Nashville meeting instructed the Secretary to communicate with Senators Worley and Parkes and with Representatives Hawk, Stewart, Shropshire, Ward and Elkins and convey to them

an expression of gratitude for the earnest interest and active support accorded by them to the bill introduced by our Legislative Committee providing for a Board of Preliminary Examiners. These were the men who worked and talked for the bill.

If you hear anybody kicking about not receiving the Journal, please put a gentle reminder into his ear that dues are long past due. All who are in arrears have had their names dropped from the mailing list.

Dr. F. B. Dunklin, Representative from Sumner, is one of the men in the House of the Legislature who is everlastingly at work for whatever will protect public health. Dr. Dunklin has rung absolutely true on every vote, in every word, and in every act.

Society Proceedings

SULLIVAN COUNTY.

The regular monthly meeting of the Sullivan County Medical Society was held March 3, 1915, at Hotel Bristol. The meeting was called to order by the President, Dr. C. W. Fleenor, of Holston Valley, at 11:30 a. m. The members answering the roll call were: Drs. Cowan, Wiley, Booher, Vanee, Kernon, and Keebler, of Bristol; Dr. J. B. Robinson, of Mountain City; Dr. D. R. Stout, of Butler; Dr. E. S. King, of Bluff City; Dr. J. L. Cottrell, of Mountain City; Dr. D. C. Kingsolver, of Green Springs, Va.; Dr. Campbell, of Elizabethton, was present as a visitor of the Society.

Following the roll call and the reading of the minutes the Society proceeded to the transaction of business. In this connection was brought up the eligibility of those doctors who reside in Tennessee and have become members of the Virginia State Society to become associate members of this Society. After much discussion it was decided that the Society could not depart from the ruling as laid down by the American Medical Association, and that doctors residing in Tennessee were only eligible for full, active membership. The application of Dr. Porter, of Newsome, N. C., was reported by the Board of Censors as rejected, on the

grounds that Dr. Porter while living in Tennessee was beyond the jurisdiction of this Society. All business having been disposed of, the Society heard the reading of papers for the meeting. Dr. W. R. Booher read a highly entertaining and instructive paper on "Appendicitis in Children." Dr. Paul Kernan read a paper on "The Business Side of Practice," following which both papers were very generally discussed. The discussion being closed, the Society adjourned to meet April 6 at Hotel Bristol.

CARROLL COUNTY.

The Carroll County Medical Association met Tuesday in Huntingdon. The meeting was called to order by Dr. W. M. Wright. Following doctors were present: W. M. Wright, J. J. Laneaster, L. L. Dunean, Tyler Cox, H. T. Collier, A. I. Dennison, G. L. McDaniel, H. H. Martin, B. C. Dodds, S. W. Huffman and Jos. W. McCall.

A very interesting discussion of the Harrison Anti-Narcotic Law and other subjects was had, at the conclusion of which the following were elected officers: Dr. L. L. Dunean, President; Dr. H. T. Collier, Dr. J. J. Laneaster, Dr. G. L. McDaniel, Vice-Presidents; Dr. B. C. Dodds, Secretary-Treasurer. Dr. A. I. Dennison was elected to the state association with Dr. Joseph W. McCall as alternate. The next meeting will be at McKenzie, May 25.

GREENE COUNTY.

Following is the program for the Greene County Medical Society for the year 1915:

April 5—Treatment Injuries to the Cornea, Dr. G. S. Hays; Anaesthetics, Dr. J. F. Lane; Clinical Case Reports.

May 3—A Paper, Dr. C. P. Fox; Gastritis, Dr. W. H. Hawkins; Clinical Case Reports.

June 7—Enterocolitis, Dr. S. T. Brumley; Obstetrics in Country Practice, Dr. M. A. Blanton; Clinical Case Reports.

July 5—Typhoid Fever, Dr. F. C. Britton; Membranous Croup, Dr. J. B. Bell; Clinical Case Reports.

August 2—Dysmenorrhoea, Dr. R. O. Hufaker; Appendicitis, Dr. E. M. Bell; Clinical Case Reports.

September 6—Dysentery, Dr. E. M. Myers;

Infantile Colic, Dr. J. S. Holt; Clinical Case Reports.

October 4—Eclampsia—Dr. T. H. Woolsey; A Paper, Dr. J. Carson Moore; Clinical Case Reports.

November 1—A Paper, Dr. J. D. Campbell; Tuberculosis, Dr. T. D. Cloyd.

December 6—Traumatism, Dr. W. M. Bright; A Paper, Dr. J. W. Cloyd; Clinical Case Reports.

We have arranged monthly meetings and for a permanent home over the Square Drug Store. Do no fail to attend and prepare your paper for your turn on the program.

M. A. BLANTON, Sec.

MIDDLE TENNESSEE MEDICAL ASSOCIATION.

Dear Doctor: The next meeting of the Middle Tennessee Medical Association will be in Lebanon May 20, 21. All reputable physicians of this and adjoining territories are urged to attend this meeting. The high standard of work always presented at its meetings is worthy of your active support. Make your plans to be present; you will have both a pleasant and profitable time.

R. W. BILLINGTON,
Secretary.

WEST TENNESSEE MEDICAL AND SURGICAL ASSOCIATION.

The twenty-fifth annual meeting of the West Tennessee Medical and Surgical Association will be held at Dyersburg, May 19 and 20. The veteran Secretary, Dr. I. A. McSwain, of Paris, is constructing a program and sending out the call for the gathering of the clan. The "clan," so far as the West Tennessee Association is concerned, is composed of all reputable Tennessee physicians—there are no narrow confining lines set by the West Tennessee Association.

After the completion of the scientific program a banquet will be set by the Dyer County Medical Society, and on the next day all who care to go will be taken for a good time to Reelfoot Lake.

The West Tennessee Association meetings are always well attended, the program is always good, and the entertainment for visiting physicians is always most delightful.

DAVIDSON COUNTY.

March 2nd. The Academy was called to order at 8:20 p. m. by the Vice-President, Dr. H. M. Tigert. The following members were present: Drs. Keller, Harris, Cowden, Litterer, Bloomstein, DeWitt, Floyd, Sharp, Sumpter, H. King, Cullom, A. A. and N. C. Leonard, Friedman, Sanders, Sullivan, Weaver, Harrington, Jack Witherspoon, Aycock, Fuqua, Oughterson, Bromberg, J. M. King, Morrison, McKinney, Lacy, Billington, Orr, D. Eve, Jr., McCabe, O. Bryan, Manier, Pickens, Kennon, Moore, Erwards, Haggard, and Pollard.

The minutes of the previous meeting were read and approved.

The Secretary read a letter from Dr. A. R. Craig, Secretary of the A. M. A., in regard to the activity of the Wine of Cardui concern in getting statements from physicians to be used by the latter in their suit against the A. M. A.

A letter was also read from the Chief of Police of Nashville in regard to the practice of some licensed physicians who are stationed in drug stores to write prescriptions for whiskey. Dr. Bromberg moved that a committee be appointed to confer with the Chief of Police to get the names, evidence, etc., of the men alleged to be guilty of prescribing whiskey in drug stores. Seconded and carried.

Dr. J. A. Haiman's application was read and voted on. There were twenty-five votes cast, all in the affirmative, and Dr. Haiman was declared elected.

Dr. McCabe moved that the committee called for in Dr. Bromberg's motion be empowered to investigate the prescribing of narcotics as well as that of whiskey. Seconded and carried. The Chair appointed Drs. McCabe, Bromberg and D. Eve, Jr.

Dr. McCabe read the bill which the Committee on Public Health and Legislation had introduced in the Legislature, regulating the practice of medicine. This was discussed by Drs. Gallagher, Bromberg, Caldwell and McCabe.

The regular order of business was suspended to allow Dr. Friedman to present the following case, the patient being present:

"Robert W.; age, 33; German; mechanic.

Previous history, syphilis five years ago. Had two injections of 606. No other treatment. The chancre disappeared and there were no secondaries. Former eruptions, none. Family history, negative. Present condition, general health good. Weight 150 pounds. Appetite and digestion good. Bowels regular. Tongue clean. Throat normal. The present attack began about eight weeks ago when patient noticed an enlargement on the right side of his neck below the angle of his jaw. He consulted a physician, who incised the mass, but instead of it subsiding it began to increase in size. He came to Nashville and went to a local hospital. Patient was given a strong ichthyol ointment and some medicine to take internally, probably potassium iodide, of which he was to take ten drops t. i. d. p. e. Patient took five doses, after which he began to break out over his entire face, neck and ears. The patient presents enlarged glands on both sides of the neck and a papulo-bullous and tubercular lesions on face and neck. The ears are reddened, excoriated and covered with crusts. The patient shows enlarged epitrochlears and post-cervical glands. The skin over the rest of the body is perfectly normal. The patient has a temperature of 100.8. Diagnosis, dermatitis medica-mentosa et venenata."

The essayist of the evening was Dr. Howard King, who read on "Pityriasis Rosea."

Dr. Friedman (opening the discussion) said that the essayist had covered the ground thoroughly and left little to be added. In regard to the treatment, the speaker said that some cases will respond to bland lotions, while in others nothing will do any good. There are others still which will respond to anti-parasitic remedies. As to the cause, recent opinion seems to favor the intestinal canal.

Dr. J. M. King said that many cases will get well in about six weeks without any treatment. Most parasitic diseases show no tendency to spontaneous cure and therefore thinks this disease due to intestinal disturbance, as lichen planus. From the fact that pityriasis rosea starts from a mother patch about the waist or thigh and then spreads might infer that it is parasitic; also, that the disease often occurs in more than one member of a family. Dr. King stated that he follows the plan of

Dr. Isadore Dyer and treats it as a parasitic disease.

Dr. Howard King closed stressing some of the points brought on in his paper.

Under the head of case reports, Dr. J. M. King exhibited X-ray plates in which the presence of gall-stones was demonstrated.

Adjourned 9:40.

March 9th. The President, Dr. W. E. Hibbett, called the regular weekly meeting of the Academy to order at 8:25 p. m. The following members were present: Drs. Roberts, Floyd, Preston, Friedman, Padgett, Simmons, H. King, Sharber, Litterer, Price, Crawford, T. A. and N. C. Leonard, Padgett, Morrissey, Toy, Haskell, O. Bryan, Coodwin, Reynolds, Hill, T. Briggs, Hollabaugh, Grizzard, Sifford, Gleaves, Pollard, Morris, C. F. Anderson, Jones, Eggstein, Dunklin, Ezell, Orr, Larkin Smith, Ward Williamson, McKinney, Manier, Pickens, McCampbell, Bloomstein, Davis, Harris, Neil, Keller, Thach, West, C. A. Robertson, McCabe, Shoulders, B. G. Tucker, Tigert, R. A. Barr, Fuqua, Cullom, Oughterson, Kennon, J. M. King, DeWitt, S. S. Briggs, H. Barr, Drake, Britt and Jack Witherspoon.

The reading of the minutes was dispensed with.

Dr. Price, on behalf of the Board of Trustees of the Academy, asked for more time in regard to the Merry matter.

Dr. Frazier of the Department of Internal Revenue explained the Harrison Act.

Dr. O. N. Bryan read a paper on "The Management of Diabetes Mellitus."

Dr. Owsley Manier, opening the discussion, said that from the standpoint of internal medicine, diabetes mellitus was most interesting and disappointing. The suggestion, he said, of Dr. Bryan, to follow Nonne's classification was most logical. He was interested in the percentage of diabetics that had tuberculosis, and said that of seven cases of diabetes recently in Vanderbilt Hospital, five had pulmonary tuberculosis. The speaker disclaimed being a quitter in critical situations, but thinks that in a definite diabetic coma one had might as well quit, for he has never seen one come out.

Dr. Oughterson said that the younger the individual the more grave the prognosis; also, that obese individuals seem to live longer than

thin ones. He urged the use of bicarbonate of soda in diabetic coma. Dr. Oughterson thinks the frequency of tuberculosis in conjunction with diabetes higher than given by the essayist. In the treatment of these cases the speaker said that an occasional violent purge following the withdrawal of diet for a day seems to eliminate sugar from the urine of a few.

Dr. Bloomstein called attention to the symptom of frequent micturition in children as possibly the presenting one of diabetes. He also called attention to itching as a possible first symptom.

Dr. J. M. King asked Dr. Bryan if he had had any experience with the drug Jambul in the treatment of diabetes. He spoke further on the sin manifestations of diabetes.

Dr. Robertson said that the management of this disease is over-talked and under-done. He said that the movement of the diet in this disease is one of the most difficult tasks in medicine and that too much attention has been paid to carbo-hydrates. He asked if the reduction of the amount of sugar in patient's urine does the patient any good. He thinks the prevention of acidosis most important. In regard to drugs, powdered opium has been the best therapeutic agent in his hand; the next, urotropin, and then ergot.

Dr. Roberts lamented our lack of knowledge on this subject, especially the pathology. He discussed carbo-hydrate metabolism and said that he has had a moderate degree of success in the treatment of diabetes—but not in young children. In regard to the treatment, Dr. Roberts thinks that a stay of four to six weeks at Red Boiling Springs, Macon County, Tennessee, during the year of value. He also advocated the use of the chlorides of gold and arsenic in diabetes.

Dr. Bryan (closing) said that in regard to coma he agrees with Dr. Manier, but is encouraged by Dr. Oughterson's reports of Levy's results. Replying to Dr. King, he said that he had never used Jambul in the treatment of this disease.

Before adjournment, Dr. West moved (seconded by Dr. Price) that the Academy go on record as endorsing the bill regulating the practice of medicine in Tennessee as introduced by the Committee on Public Health and Leg-

islation of the State Society. Carried unanimously. The Academy adjourned at 10:00 p. m.

J. F. GALLAGHER,
Secretary.

UPPER CUMBERLAND MEDICAL SOCIETY.

The twenty-first annual meeting of the Upper Cumberland Medical Society will convene at Cookeville on May 25th, for a two-days' session. Dr. J. S. Campbell, Gordonsville, is President, and Dr. W. A. Howard, Algood, Secretary, of this Society. Its meetings are always well attended and the program always well filled.

EAST TENNESSEE MEDICAL ASSOCIATION.

On May 20 and 21, the East Tennessee Medical Association will be convened at Athens. The announcement issued by the Secretary, Dr. H. P. Latimore, states that a fine scientific program will be rendered by East Tennessee doctors and a big crowd is expected. This sectional society has been doing splendid work for several years. Dr. J. W. Cox, of Johnson City, is President; Drs. T. H. Woolsey and Gus Shipley, Vice-Presidents, and Dr. H. P. Latimore, Secretary-Treasurer.

ROBERTSON COUNTY.

The greatest day in the history of the Robertson County Medical Society was April 20, when the April meeting of the society was held in the chapel of the Watauga Sanitarium, Ridgetop, Tenn. The meeting was called to order at 10 a. m. by President Henry, and opened with prayer by Rev. W. Martin of Greenbrier. Minutes of last meeting read and approved by nineteen out of twenty-two members of the society.

An address of welcome was given by Dr. C. A. Robertson, Superintendent of the Sanitarium. The following named physicians were visitors: Cowden, J. A. Witherspoon, Jack Witherspoon, Glasgow, W. A. Bryan, O. N. Bryan, West, Litterer, Tigert, Billington, Shoulders, Sanders, Dixon, Reagin, Bogle, Nashville; Tyler, Guthrie, Ky.; Reardon, Neal, Blackburn, Bowling Green, Ky.; Graham, Henderson, Ky.; M. B. Garner, C. W.

J. B. Woodruff read a paper on "Chronic Nephritis," and it was discussed by Drs. Winters, Banks, Fyke, Shoulders. Dr. J. R. Robb, Goodlettsville, Tenn.

In the forenoon two papers were read. Dr. Connell read a paper on "Diabetes Mellitus." The paper was discussed by Drs. Jones, Banks, Fyke, Woodard, Winters.

The privilege of discussing these papers was given to all the visiting physicians. Drs. Fyke and Shoulders made a verbal report of the transactions of the House of Delegates of the last meeting of the Tennessee State Medical Association. Adjourned for dinner.

The society was entertained at dinner by Dr. and Mrs. C. A. Robertson on the lawn of the Sanitarium, and it was served in a way that made everybody feel glad that they were there. After-dinner speeches were made by Drs. Cowden, J. A. Witherspoon and Blackburn. After dinner, Dr. Robertson very kindly allowed all the physicians to inspect the Sanitarium and the grounds.

Reconvened at 2:45 p. m. In the afternoon session papers were read as follows: Dr. West, "The County Medical Society;" Dr. Billington, "Orthopoeic Surgery in General Practice;" Dr. O. N. Bryan, "Diagnosis of Pneumonia;" Dr. W. A. Bryan, "Tuberculous Peritonitis;" Dr. C. N. Cowden, "Tuberculosis of Bones."

A rising vote of thanks was given Dr. and Mrs. C. A. Robertson for their hospitality and the interest they manifested in the society. An annual invitation was given for the society to hold its spring session in the Sanitarium by Dr. Robertson, and it was accepted.

An invitation was given by Dr. Jones for the May meeting to be held in Orlinda. It was accepted, and Drs. Banks, Connell, M. L. and Dye were appointed for the Directors.

B. F. FYK, Sec.-Treas.

DOCTOR RUFUS PITTS.

The following resolutions were introduced in the House of Delegates of the Tennessee State Medical Association and were ordered published in the Journal. Dr. Pitts served for many years as Secretary of the Rutherford County Medical Society and the resolu-

tions were introduced by a delegate from that society, Dr. W. C. Bilbro.

"Dr. Rufus Pitts was born in Rutherford county, April 25, 1874, and died on June 1, 1914, being at the time of his death 40 years old. He graduated from the Medical Department of the University of the South in 1901 and was licensed to practice in 1902. From that time until his death he was a zealous and painstaking physician, that loved his profession and did his best to advance it in every way possible. He was the Secretary and Treasurer of his county society for many years, and I do not believe there was ever a secretary that did more to make the work of his society interesting and instructive than he did. He never failed to attend its meetings, and labored continuously to have the meetings well attended and profitable. Had it not been for his ill health he would have been a towering physician—his natural inclination and untiring efforts and love for medicine would have accomplished much.

"Resolved, that in the death of Dr. Pitts the medical profession has lost a valuable member, whose life has so well exemplified the qualities of a courteous, affable, intellectual and ethical physician and gentleman, and one whom his county society delighted to honor."

Book Reviews

PRACTICE OF MEDICINE. By Hobart Amory Hare, B.Sc., M.D., Professor of Therapeutics, Materia Medica, and Diagnosis in Jefferson Medical College. Third edition, revised, enlarged, illustrated. Lea & Febiger, Philadelphia. 1915.

This book is Hare from end to end, stating his convictions in characteristic manner and giving credit to whom due for statement not original with the author. The revision of the second edition has been thoroughly done, though no reference is made to new investigative work in various fields. The author seems to prefer to wait for proof that cannot be controverted before committing himself and his text. In our humble opinion, Dr. Hare is eminently correct in this position. Too many of our texts are full of stuff that promised, but did not pan out.

The subject of the intestinal parasites is weakly handled, as in practically all of our books. The same can be said of the discussion of pellagra. The author's treatment of this subject is decidedly

weak. The strength of this book is to be found in the chapters dealing with those major diseases which have long held the attention of medical men and which are well understood as to etiology and pathology.

THE CLINICS OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago, February, 1915. W. B. Saunders Company, Philadelphia. Bi-monthly, \$8.00 per year.

Intestinal fistulas, aneurysm of the brachial artery, division and suture of nerve trunks of the brachial plexus, mixed cell periosteal sarcoma of femur with disarticulation at the hip, open reduction of posterior dislocation of spine at level of second lumbar vertebra, compound fracture of malar bone with loss of external wall of orbit and outward dislocation of eyeball, in which paraffin injection failed and was followed by successful bone transplantation, ununited birth fracture of clavicle, carbuncle with septicemia, and metastatic pluerisy followed by death, contracting cicatrices of finger and thumb, malunion of a fractured femur, and chronic appendicitis are the subjects covered by Dr. Murphy in this volume. A talk by Dr. Harvey Gaylord on "Cancer Research and Clinical Aspects" is one of the interesting and instructive contributions to this volume as is a discussion by Dr. Mix, on the case of division of the brachial plexus.

PRINCIPLES OF HYGIENE. New fifth edition. By D. H. Bergey, M.D., First Assistant, Laboratory of Hygiene, University of Pennsylvania. 531 pages, illustrated. W. B. Saunders Company, Philadelphia, 1915. Cloth, \$3.00.

This book makes no pretense as an exhaustive treatise, but is intended to set forth general principles for the physician and the sanitarian. Old tenets have been discarded unless they have stood the test of time and modern application. It would be pleasing if the author had given his opinion as to the value or worthlessness of more of the procedures which are resorted to at the present time as disease preventors, and the book would have greater value if rural problems had been kept in mind along with those existent in large, popular centers. It would be a fine thing to require of every man who has it in mind to prepare a book on any branch of medicine or surgery that he take a post-graduate course of at least one year's residence in the country. Our city authors are generally too far away from nature as she really is.

NERVOUS AND MENTAL DISEASE. By Archibald Church, M.D., Professor of Nervous and Mental Diseases in the Northwestern University School, Chicago, and Frederick Peterson, M.D., New York. Eighth edition, revised, illustrated. W. B. Saunders Company, Philadelphia, 1914. Cloth, \$5.00.

The men who travels widely over a great expanse of territory has fastened in his mind certain land marks and guide posts in each section for which he looks and by which he is guided. Upon returning to any part of his field of travel after an absence in some other part, he finds changes which might bewilder were it not for the solid, permanent and outstanding objects which time does not destroy, and in which no change is made except the change which modern progress makes necessary. And so the doctor in his broad field of service looks for guidance in standard books—books which have proven value, which adhere to the "safety first" ideas and which change only when scientific progress has shown positive need for change. Such an one is the volume of Church and Peterson. The eighth edition of this really standard book is just what you would expect it to be. Very few material changes have been made, except in the chapters dealing with vertigo, infantile paralysis, and syphilis, though the recent studies in spinal fluid changes, glands and internal secretions are fully referred to in the proper places for such reference. This is one of the books that the physicians *must* have.

"SURGERY OF THE BLOOD VESSELS." By J. Shelton Horsley, M.D., Richmond, Va. Illustrated. New York. Eighth edition, revised, illustrated. W. C. V. Mosley Co., St. Louis, 1915.

This book is a real contribution by a Southern man upon a subject which is receiving most earnest consideration at the hands of some of the most advanced workers in surgical fields. Horsley is a pioneer in this particular branch of surgery and his work stands out as original, and as a valuable contribution. A great deal of the subject matter of his book is descriptive of his own work, some of which has been truly remarkable.

The illustrations are numerous and helpful.

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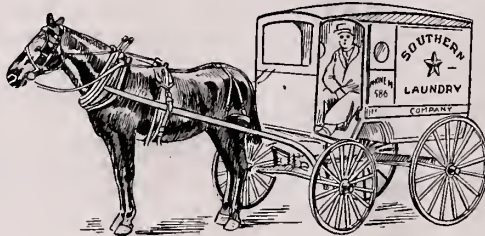
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NUMBER 2

THE RELATION OF THE PRACTICING PHYSICIAN TO PUBLIC HEALTH ADMINISTRATION.*

By John W. Trask

Assistant Surgeon-General United States
Public Health Service.

It is my purpose to address you regarding the relation of the practicing physician to the work of local, state and national health departments. I am going to explain to you how it is impossible for the health department of a city, county or state to perform the work for which it has been organized unless it has the co-operation of the practicing physician. I will show you why even the health work of the national government depends upon your assistance.

A principal function of the Federal health department is the control of epidemics and the prevention of the spread of disease from one state to another. It is impossible for the national government to prevent the spread of disease from state to state unless it knows in which states, and where in these states, the diseases it wishes to control are prevalent. It cannot prevent the spread of these diseases without knowing where they are present. It must get this information from the several state health departments.

In turn the state health departments can not furnish to the national government information of the prevalence of disease within their respective jurisdictions, nor can they control the spread of disease within their

respective states, unless they know what diseases are present and where they are present. Now the state health department can secure this information of the prevalence of disease only from the practicing physician, either by requiring such reports to be made to the local health departments of cities and counties and the local officials to furnish the information to the state.

Nor can the local health departments, city, county, or township, prevent the occurrence of disease, nor control communicable diseases in their respective jurisdictions, without a knowledge of what diseases are present and where and under what conditions they are occurring. This information they can obtain only from the practicing physicians by requiring reports of the occurrence of cases of the diseases to be controlled.

Thus it will be seen that national control of disease, state control of disease, and municipal and county control of disease all depend upon the co-operation of the practicing physician. Public health administration for the city, the county, the state, and the country as a whole, all depend for their success upon the information as to the prevalence of disease obtained from physician's reports of cases.

Our standard of living as a people is improving. Greater and greater consideration is being given to the conditions under which we live and work. We have come to realize that in any community the health and welfare of each individual and of each household depend in large measure upon the conditions of health and welfare of every other individual and of every other household.

*Read at meeting of Tennessee State Medical Association, Nashville, April, 1915.

In the complex life of modern civilization we cannot individually protect ourselves from disease. The danger of infection from the sick and diseased whom we do not see, and of whose existence we may be unaware, may be greater than the danger from the sick among those immediately about us. We can protect ourselves from infection from the sick of whom we know, but we are in large measure helpless to protect ourselves from the diseases of the sick of whose existence we are in ignorance. Every case of a communicable disease in a community is directly or indirectly a menace to every individual. The welfare of each depends upon the health of the community.

For a century or more there has been growing, at first slowly, and in the last decade or two by leaps and bounds, an interest in social betterment. It is in a way a result of this movement that the part played by disease in determining the happiness, welfare and efficiency of a community has been recognized.

It has come to be realized that a community in which typhoid fever or malaria, or any other disease prevails, is a sick community, and that a sick community is deprived of happiness and of efficiency to the extent to which it is sick.

Coincident with this period of growing social interest there has been a most unusual advance in the world's knowledge in many lines. There has been a great increase in knowledge, especially of the causes of disease and their manner of spread. It has been definitely ascertained that a great many diseases which for centuries have afflicted mankind are preventable, and that while the statement of Pasteur that "It is within the power of man to cause all infectious diseases to disappear from the earth" may be as yet only a theoretical ideal, it has been frequently demonstrated that it is entirely practicable to banish from a community certain diseases and to control and gradually reduce the number of cases of many other diseases. There are many diseases which the average community harbors merely because the inhabitants lack the initiative, energy and desire to protect themselves from them.

The present movement for social betterment has manifested itself in a larger com-

pensation for wage-earners, in shorter hours for workingmen, in the protection of women and children from excessive hours of labor, in the improvement of housing conditions, in greater attention to recreation, in the education of the people in useful subjects, and in the prevention and control of disease.

The establishment of health departments has been a part of the general movement. The work of these departments is to control the controllable diseases and they can properly have no other function. Many communities have attained the attitude of mind in which they are insisting that all diseases which it is possible to control shall be controlled. It is only a question of time and social progress when all communities will reach the same determination.

The work of health departments being the control of the controllable diseases, it is important to consider the things essential to this work. It is impossible for any health department, be its statutory powers and available appropriations ever so great, to effectively control any disease without first having information as to whether the disease is present in the community, and, if present, how prevalent, and where and under what conditions cases are occurring. The burning of punk in the streets, or the placing of mystic symbols over the doorway, or the mere appointment of a health officer and the appropriation of money, will not protect against disease. The control of disease is a work which requires definite information and knowledge of the occurrence of cases made use of by persons trained in epidemiology, that is, by persons having knowledge of the conditions which produce disease or cause its spread.

There are two main classes of controllable diseases at present recognized. There are communicable diseases and occupational diseases. The communicable diseases spread from individual to individual. Each case is a focus from which many persons may receive infection. Each focus is a potential epidemic. With but one or two exceptions every attempt at the control of communicable diseases other than by ascertaining the cases that occur, and the conditions under which they develop, has been a failure.

Occupational diseases are due to industrial environment and can be prevented only by ascertaining where conditions exist which are capable of producing them in workmen. Each case of an occupational disease shows where conditions of this kind exist, for the fact that a case has developed is conclusive evidence of the presence of conditions capable of producing the disease. To find where conditions exist which will produce these diseases it is, therefore, necessary to know of each case that occurs, and the time, place and conditions under which it occurs.

For diseases due to improper living, or housing conditions, an economic or social or educational readjustment is required. The degree of the burden laid upon the community by the existence of such diseases, and the need for a change in living or social conditions are also made manifest only by a knowledge of the cases of these diseases which occur and the conditions under which they occur.

The community is helpless to control any disease in the absence of definite knowledge of the conditions under which cases are occurring, and a health department which does not know of the prevalence of disease within its jurisdiction is a health department in name only.

As a rule the heads of health departments have been physicians. This has been so for the reason that the physician, because of his training, is the one most capable of recognizing cases of disease, and presumably knows their methods of spread, and the means by which they may be controlled. There is no doubt that a man with a medical education has a better foundation upon which to build the special knowledge necessary to make an efficient health officer than one trained in other lines.

The work of the health officer, however, requires special knowledge of diseases and their prevention or control. At the present time the courses given by even our best medical schools furnish to the student but little opportunity to acquire any but the most superficial knowledge of the prevention and control of disease in its relation to the community. To so great an extent has this been true that it is quite probable that the ad-

vances made in public health administration in this country have been due as much to the demands of social workers for efficient health officers as to any influence which medical practitioners may have had.

The action taken during the last few years by a number of the largest medical schools in the country in providing courses in preventive medicine for the training of health officers has, without doubt, been in response as much to the demands of social workers and other non-medical persons as to any influence which has come from the medical practitioner. This is not said in a spirit of criticism. It is only what one would naturally expect.

In a way the social worker can properly be expected to be more interested in, and have a more thorough understanding of the need for the establishment of efficient health departments and the prevention of disease than can the practicing physician. The practicing physician encounters disease in detail. He sees one case at a time. His interest is in the patient rather than in the community and his energies are spent in attempting to relieve the patient from the physical burden of sickness. In doing this he seldom takes into consideration the source from which the disease was contracted and that the conditions which made his patient sick may still be operating to make others ill, nor does he always take into consideration in communicable diseases that his patient may be a menace to the community and endangering others. If he does recognize this he does not always feel his responsibilities in the matter. The thought I want to express is that the practicing physician has his thought and attention focused on getting his patient well, and that the significance of the occurrence of a case of disease as it relates to the community in general seldom appeals to him.

On the other hand, the business of the social and public health worker is the bettering of the conditions under which man lives. To them the misery and sorrow caused by disease are apparent. The bearing of disease on poverty and of poverty on disease are daily seen. The sickness caused by faulty industrial conditions is being constantly brought to their attention. In their daily work the need for the prevention of disease

and the possibilities of its prevention are constantly before them. The social worker and health officer see the effect of disease on the community. The physician has to do with the disease of individuals, and, although the physician may in many instances have a greater technical knowledge of the origin and effects of disease his field of vision is narrowed by the nature of his calling.

The health department is established to cure the community of its diseases and to keep it well. The individual is significant to the health department only as his condition affects the community in general. The health department can properly have no function other than that of controlling disease in the community, and it is in this work that the practicing physician plays a vitally important part.

To control disease in the community the health department, as previously stated, must know when disease exists, where it exists, and under what conditions it occurs. To know this the health department must have a knowledge of the cases of controllable diseases as they occur. This knowledge of cases can be obtained only through the reports of the notifiable diseases made by physicians. The health department has no means of learning of the prevalence of disease other than the information obtained in this way. The health department does not go into the homes. It is not called upon to treat the sick as physicians are. Physicians are the only persons in the community who, to any considerable extent, come into contact with the sick and learn of the occurrence of disease.

Now, inasmuch as the health department cannot do its work without information of the occurrence of the controllable diseases, and inasmuch as this information can be had only through the reports made by physicians of the occurrence of cases in their practice, the physician becomes an essential part of any scheme of public health administration. The practicing physician is essentially a part of the health department. This is true, whether the physician recognizes it or not, and whether the community recognizes it or not. The physician is the outpost, the picket that must give to the health department information of the approach of the enemy, his numer-

ical strength and his armament.

Co-operating with an efficient health officer the practicing physicians of a community have it within their power to make the efforts of the health department successful or to make their success impossible. So important is the control of disease to the welfare of the community, and so essential is the co-operation of the practicing physician through the reporting of cases, that it may be taken for granted that intelligent communities will bring about a satisfactory co-operation in this work between the physicians and the health department. It is only a question whether a public-spirited, humanitarian medical profession will take the initiative and voluntarily and cheerfully accept and carry out its responsibilities, as it undoubtedly will. Any other course is inconceivable. Certainly upon the attitude of the medical profession in this matter will largely depend its relation to the community in the future.

The practicing physician who fails to report a case of a communicable disease thereby endangers the welfare of the community and exposes others to the danger of contracting the disease, and among those thus exposed may be others of his patients. He is neither a good physician nor a good citizen, and must be considered as opposed to the principle of the control of disease and the protection of the community for which the health department stands.

With the help and co-operation of the practicing physician the health department can do much to prove the truth of Pasteur's statement that it is within the power of man to cause all infectious diseases to disappear. Without the co-operation of the practicing physician the health department can do but little.

A HOARY-HEADED HERESY.*

By W. K. Vance, M.D.,
Bristol, Tenn.

In a profession like the one we represent it is not strange that there have arisen and flourished ideas relative to the treatment of diseases which an advance in medical knowl-

*Read at meeting of Tennessee State Medical Association, Nashville, April, 1915.

edge and a more thorough practical experience have relegated to oblivion. Practical medicine today owes its advanced status to the fact that the crucial test of experience has resulted in the abandonment of many therapeutic ideas formerly sanctioned by the brainiest men in the profession. They have been weighed in the balances, found wanting and abandoned, while we have held fast to that which is good. When I express the belief that we have for ages held fast to one that is not good I may be viewed in the same light by most of you as would be the bad little boy who throws rocks at and in other ways maltreats his good old grandmother, as the practice to which I refer has been orthodox from time immemorial and is, perhaps, dear to you all and adhered to by ninety-nine and nine-tenths of the foremost practitioners in the world today. At any rate I have yet to meet for the first time in consultation a physician who did not recommend with an assurance that was amazing this, to me, obnoxious line of treatment. I refer to the plan of treatment so universally recommended by all authorities in the management of intestinal hemorrhage superinduced by typhoid fever.

In the year 1897 it was my good fortune to attend the semi-centennial meeting of the American Medical Association in Philadelphia. Those of you who were there and in attendance upon the section of General Medicine during the time that typhoid fever was under discussion have not yet forgotten, I am sure, a modest and unassuming young physician by the name of H. G. McCormick, of Williamsport, Pa., who read a paper on the treatment of typhoid fever and participated in its discussion. His ideas were practically what mine had been for years prior to that time, but the difference was that I had been too big a coward up to that time to put one of mine to the test for the reason that the "authorities" were against me, and I have never been ambitious to play the part of "Hamlet" in a malpractice suit. You who heard this discussion will recall the fact that several of the most renowned authorities in the United States and Europe were present, and without exception they pronounced the ideas advanced by Dr. McCormick relative to the

treatment of intestinal hemorrhage as not only unorthodox but dangerous, my friend, Dr. William Osler, being one of his most caustic critics. I wish today to thank this courageous member of our profession publicly for the inspiration gotten that day and testify to the fact that by adopting his views and carrying them out in practice during the intervening eighteen years I have had but three typhoid fever patients in my own practice die, one of these being an atypical case with a subnormal temperature throughout its course, the autopsy alone revealing its true nature, and in none was hemorrhage a contributing factor. I also wish to say that I have never, in all the discussions I have been permitted to hear on medical questions, seen so unassuming a champion so effectually maintain his position or escape injury from the "big guns." The facts are that it was difficult for me to restrain myself from repeating a scene that is reported to have taken place at a revival in the Methodist church in a town in Southwest Virginia several years ago. At that time this church had as its pastor a comparatively young minister of unusual earnestness and eloquence. By reason of his fiery zeal in his Master's cause he had gotten up quite a revival in his church, which was creating great interest over a large section of country. Another old minister of the same denomination who lived away across the mountains, hearing so much talk of this prodigy in his church, decided to go over and hear him preach. He was not only warmed up, but literally carried away with his word painting and eloquence, and, unable to restrain himself, jumped up from the seat he occupied in the pulpit, shouting from joy, slapped the young preacher on the back, exclaiming at the top of his voice, "Halleluia! Amen! Thank God! A perfect stud!"

Within a few days of my return from this meeting I was called to see a young lady of our city, the sister of one of our most competent physicians, who was temporarily absent from home. Her symptoms from the first were indicative of an unusually severe attack of typhoid fever. On her brother's return he very kindly expressed a desire for me to continue in charge of the case. In due time very profuse hemorrhages supervened, and for sev-

eral days little hope was entertained for her recovery. For the first time in my life, and, so far as I know, the first time in the history of this country south of Mason and Dixon's line, our text-books' teaching was ignored and at no time during this trying ordeal was an opiate given this patient. This line of procedure was fully concurred in with fear and trembling by her anxious brother, and he was kind enough to express the belief after her recovery that her case would have terminated fatally had the line of treatment previously used by him and me in like cases been pursued.

Shortly thereafter I was called to attend Percy A., a rather delicate looking young man, 27 years of age, and married. He likewise had a typical case of typhoid fever of more than ordinary severity from the beginning. We secured for him a good male nurse, whose time was fully occupied during the first two weeks in an effort to keep the temperature of this patient down in the neighborhood of 103 F. The general outlook inclined me to an unfavorable prognosis. The unusual tendency to tympany, in spite of careful dietetic management, caused me to mention to the nurse the probability of hemorrhage and request him to observe closely each action from the bowels and report immediately if any blood was observed. I had associated with me my friend, Dr. T. F. Staley, an intimate friend of the patient. On the afternoon of the eighteenth day of sickness he had a very small hemorrhage. On leaving him for the night I left explicit directions with the nurse to keep in readiness everything necessary for an emergency. At 2:30 on the morning of the nineteenth day I was called to come in haste to this patient. On arriving I was met by the nurse at the door with the information that the patient was dead. On entering the room and making a superficial inspection I was inclined to fully concur in the nurse's opinion, both in regard to the patient and his wife, who was seven months pregnant. I found the patient exsanguinated and pulseless and so far as I could detect at the time had ceased to breathe. Lying on the floor in a state of syncope was his wife. Never have I seen a post partum equal in amount to the blood lost by this patient, which filled a large bed-pan and overflowed on the bed. By aid of stethoscope I ascertained that the heart was

still beating, but too rapidly and intermittently to be counted. At this juncture my associate, Dr. Staley, arrived. As speedily as possible we got busy with our hypodermics of whiskey, camphorated oil and ether. Within twenty minutes of my arrival another large hemorrhage occurred, further saturating the bed and adding to our alarm. Accompanying this was a very large amount of gas. For a period of thirty-six hours, during which the nurses and doctors were very busy men, this patient showed no sign of consciousness or reaction, then a faint flickering pulsation was perceptible in some of the superficial arteries, followed in due time with a return of consciousness. My record shows that I visited this man thirty-nine consecutive days following this hemorrhage, during which time he made a slow but uneventful recovery, and I am happy to say that he is not only living today, but is in the best of health.

I mention these cases simply as a sample of quite a number of cases of typhoid fever complicated with intestinal hemorrhage that have come under my observation during the past eighteen years, every one of which recovered, while similar cases which I treated prior to that almost invariably died. Please bear in mind that I am dealing with profuse and not hemorrhages of moderate severity. From observation and experience I have long since ceased to regard an intestinal hemorrhage as a harbinger of serious danger. I have almost gone to the other extreme and look upon it as a salutary measure on the part of nature, provided it is judiciously managed, and usually ushers in convalescence.

Remembering the lesson learned at the Philadelphia meeting mentioned, I wish to lay special stress upon one point—which is the main object had in view in the preparation of this paper—and that is at no time within the past eighteen years in the treatment of intestinal hemorrhage has a patient of mine been robbed of a chance to recover by that old hoary-headed heresy taught in our text-books of dosing this class of sufferers with opium and ergot. That old bugbear, "Quiet the vermicular contraction with morphine and contract the bleeding capillaries with ergot," that has come sounding down the ages and repeated parrot-like by every doctor, so far as my knowledge goes, who

wanted to make himself famous by giving us a work on practice, has cost the world, in my humble judgment, thousands of human lives.

I sometimes think, with all due regard to our medical authors, that one great drawback to our profession is that too many of us allow some one else to do our thinking. We are all more or less routinists and are influenced too much by precedent or some so-called authority's *ipse dixit*. This, to my mind, is the explanation of the above world-wide and antiquated heresy. The iconoclast who is able to demolish such delusions is a public benefactor. Let's then get down to business and do a little reasoning for ourselves and try to determine what would be the logical result to a patient suffering with an intestinal hemorrhage if he is narcotized with morphine and nauseated with ergot. In the first place let's try comprehend the causation of said hemorrhage. No one will dispute that the source of such hemorrhage is always the ulceration of the Peyers' glands or patches. This being granted, we are bound to concede that the probability of a hemorrhage occurring in the course of a typhoid fever is very much greater if the gut is distended with gas and the ulcerated patch put on the stretch. These self-evident truths being admitted, it follows as a corollary that an opiate, which we all know will lock up the bowels by temporarily obtunding the sensibility and contractile power of their muscular coats, leaving the intestinal contents to undergo further chemical changes, thus causing an increase in the tympany, will necessarily enhance the danger of a continuance of the hemorrhage.

It seems to me equally dangerous and illogical to administer ergot under like circumstances. Admit its physiological and therapeutic effect is what all authorities claim it is, to wit, "a stimulant of involuntary muscular tissue." Is it not reasonable to suppose that when it causes contraction of the bleeding capillaries that it exerts a similar effect on all the capillaries of the body? This naturally results in the effect for which it is noted, namely, "raising the blood pressure." Would not this increased blood pressure, following the law of hydrostatics, naturally result in a larger amount of effusion at the seat of hemorrhage, or in event the hemorrhage has stopped by

the formation of a clot, would not the increased arterial pressure likely dislodge said clot, thus re-exciting the hemorrhage?

Again, quoting from a recent edition of Potter's *Materia Medica*: "After a full dose of ergot there is at first a brief fall of the blood pressure due to the *depressant action of the drug on the heart*." At a time when very heroic measures have to be called to our aid to hold up a weak and flagging heart does not seem to me an auspicious occasion for administering a drug which has a depressant action on it.

The same authority says: "In large doses ergot acts as a gastro-intestinal irritant, causing nausea and vomiting, gastralgia, colic, thirst, difficult micturition and purging. It also markedly increases intestinal peristalsis." Who can question the truth of the above quotations when we consider the admitted death rate in typhoid fever of those who treat hemorrhages in the manner above indicated?

Doubtless some of my critics will say: "I have been using the plan of treatment you condemn for years and many of my patients got well." My answer is that the cases that recovered were mild in character and most probably recovered, not in consequence of, but in spite of your treatment.

A physician is never placed in a position where it is more important for him to preserve his equanimity and remember that nature is his most important helpmate than when confronted with a profuse intestinal hemorrhage. It is impossible for us to apply a styptic to the bleeding focus and astringents given *per orem* are of doubtful value. Tannic, gallic and aromatic sulphuric acids are the agents in best repute and, not being open to serious objections, may be tried. The most important indication always is to reduce the tension at the seat of hemorrhage as speedily as possible and thus aid nature's efforts to stop the hemorrhage. Much has been said and written concerning the danger of a rectal tube on such occasions. The great danger is in its omission. When carefully inserted we are often fortunate enough to secure a large discharge of gas from the large intestine at once. Should we fail in this or the eye of the tube becomes occluded with fecal matter, mucous or coagulated blood it will be necessary to remove it by means of

a liquid injected through it. If the patient is in collapse let this be hot tea, coffee or a normal saline enema.

The doubting Thomases point out the improbability of in this way lessening the tympany in the small intestine and constricting its lumen. This is an argument well taken only when they convince us that the gas distending the small intestine will not find its way through the ileocecal valve into the large intestine when the latter is emptied of its gaseous and fecal contents, thus lessening the distension in the small gut.

Next to checking the hemorrhage the matter of most vital concern to the physician is to sustain the weak heart. Lowering the patient's head and a hot application to the precordia are measures of value about which there is no dispute. Strychnia and whiskey given guardedly are measures to be commended, but in quantities such as are frequently given are to be condemned. Hypodermoclyses while condemned by some, I have quite frequently resorted to and so far without cause for regret. For tiding a patient over an emergency of this kind I must express for ether and camphorated oil, given hypodermatically, a preference over all other measures. Time and again I have seen this combination rally a failing heart and bring back pulsations in arteries when all other means had failed.

As an evidence that "the world do move" and that the morning light in this field of rational therapeutics in breaking, allow me to conclude with a quotation from the most recent edition of Osler's Practice of Medicine. With all my admiration for this honored member of our profession when he was our fellow countryman and simply Dr. William Osler, I must confess this admiration has increased since he has become Sir William and been hobnobbing with the nobility of England, not for the reasons mentioned, but for the reason he is big and broad enough to acknowledge that his criticism of Dr. McCormick eighteen years ago was unjust and he now confesses the error of the doctrine he has taught throughout his long and brilliant career. Hear him in reference to the treatment of intestinal hemorrhage in his most recent work: "Should Opium Be Given?" One-fifth of the perforations occur

with hemorrhage, and the opium may obscure the features upon which alone the diagnosis of perforation may be made. Opium increases also any tendency to tympanites. Of late *we have abandoned the use of opium* and have given the calcium chloride or lactate in doses of gr. 15 every four hours."

SOME EXPERIENCES IN DRUG ADDICTION.*

By H. E. Goetz, M.D.,
Knoxville, Tenn.

I ask the indulgence of this meeting for the time I will consume in these introductory remarks, since I desire to avail myself of this opportunity to lift my voice, in defense of the medical profession who has so frequently been charged with the responsibility for drug addiction.

It has not failed to escape my notice that on seemingly every occasion where it is possible to do so some person, and usually a layman, charlatan, quack, or other unethical person pretending to have some medical knowledge, has laid at the door of the physician the responsibility for 100 per cent of the drug addiction in our country. This has not been my experience. On the contrary, I find the physician *per se*, responsible in only a small per cent of the cases that have come to my hand for treatment. It is true that the physician is responsible in some instances, and how well do we, who go to the bedside of the sick, know how frequently the physician is excusable for the very act that leads to addiction.

Take the country practitioner whose patients are frequently miles apart, the one may be suffering with renal colic and the next patient, some miles away, may be that of maternity. He is compelled in the name of humanity to leave a narcotic for the relief of the first patient, while he goes to attend the second one.

I find amongst the males more addicts who go by the liquor route than any other way. These alcoholics demand narcotics during their sobering-up period, and until recently could obtain their drug without the assistance of the doctor.

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I have to offer in this paper an entirely new system of treatment of drug addiction, which has been most successful as we have applied it. This field has in the past been left, as I regret, largely to the quack, or worse, to the layman, and the only reason for this that I am able to assign is the unattractiveness of the work. Laymen throughout the country have bobbed up with treatments, usually originated by some physician and cast aside long before as useless, and in some instances have received and are now receiving the sanction of ethical medical men. Just why they should receive such sanction I am unable to state. However, their treatments have, one after another, proven miserable failures and useful from a mercenary standpoint, to the exploiter only.

During the past two years, I have been using in the treatment of drug addiction luminal, a drug which was first offered to the profession in this country through Merck's. It is a German product, having the usual chemistry that means little to the practicing physician. It is very closely allied to veronal and is said to belong to the urea group. It is a white crystalline powder, with a disagreeable taste, insoluble in cold water, it is cumulative in its action, and a dose given tonight in many instances would not be effective until the arising hour tomorrow. Much to be deplored, this drug does not act uniformly on all patients, and therefore must be given guardedly. I know of no death that could be attributed to this drug, and so far as my information goes, there has been none, yet the manufacturers warn us that it is more dangerous than veronal, which has caused a good many deaths. My attention was called to this drug about three years ago, and emphasis was placed upon its powerful hypnotic effect, and I find that it is in a class to itself as a hypnotic, and that it possessed marked analgesic properties. In speaking of its analgesic effect one German writer used this language: "It therefore seems probable that it may yet be destined to play an important role in the treatment of morphine habit." I had been using it for some months as a hypnotic in connection with a well-known belladonna treatment for morphine addiction, as a substitute for the narcotic when it oc-

curred to me to follow the suggestion of the German and try this drug without the belladonna, as I had become disgusted with the latter.

It was just at this time that a woman patient who had been given the usual treatment, which had made no impression on her, and who was demanding her morphine to exactly the same extent that she had been three weeks prior, that I decided to give her a treatment using luminal together with an elimination process. This patient was taking the enormous quantity of sixty grains of morphine by mouth twice daily, making a total of 120 grains in twenty-four hours. She was noisy, sleepless, would scream, tear up her bed clothes, was guilty of all the other misconduct that one might expect from a drug addict who had been deprived of drug. I therefore ordered five grains of luminal to be given by the mouth at bed time. At midnight she was still awake. At six o'clock a. m., she was awake, but her leg pains had disappeared, and she was beginning to "get comfortable," as she expressed.

After breakfast at 7 a. m., another five grains was given and at noon five grains more, at 4 p. m., still another five grain dose, since sleep had refused to come. The bowels in the meantime had been flushed with magnesium sulphate, and at 8 p. m., 26 hours after the first five grain dose had been given, the patient begun to yawn and show signs of desire for sleep. By 11 p. m. she stated that she was feeling pretty good, but was not asleep and another five grain dose was given. At 1 a. m. she was sound asleep, with a normal temperature, respiration 16, and pulse 80. Throughout the night she slept and snored. The following morning at six the nurse called me and stated that she was unable to arouse the patient. I found on examination that the reflexes were markedly diminished and arterial tension lowered, pupils widely dilated, the odor of her breath was foul; pricking with a hypodermic needle gave no response. Cold water was dashed in her face and other means of this character were apparently of no effect. We could not elicit any answers by shouting in the ear. She continued thus in profound sleep, occasionally voluntarily turning herself

in bed, and at the same time yawning and stretching the arms. For five days we were unable to arouse her. The sixth day she would open her eyes when we would shout in her ears, and on the seventh she uttered a guttural sort of sound, which we understood to be a request for water, which she took in large quantities. She would reach and attempt to hold the glass even when it was empty. However, water had been given her through the sleep as had also liquid nourishment. We had administered at various periods through the sleep coffee per rectum. On the morning of the ninth day the patient sat up in bed and announced that her vision was gone. An ophthalmoscopic examination was made immediately, which showed no appreciable change in the eye. She asked, seeming to recognize me, what her name was. When I told her she repeated the name slowly after me, saying, "that used to be my name before I died, but I don't know what they call me now." About this time the bowels began to act, a very thin offensive stool very closely resembling in physical properties of the stool of a young infant. The stool previous to this time had been quite small and, of course, highly diluted with water which we had used per rectum, and I am therefore unable to state the character of the stools had they been voluntarily passed. On the seventeenth day this patient was able to walk about the room assisted by a nurse. Prior to this time she had been unable to stand upon her feet. There seemed to have been complete incoordination of the muscles of the lower limbs.

On the twenty-first day the patient's vision had returned and I could find no symptom of the toxic effect of the drug. It was then that I asked her if she desired morphine. Her answer was that she could scarcely remember how she felt when she was under its influence, and that she no longer had a desire for it. She left the institution after seven weeks' stay, having gained in flesh twenty-four pounds, and at the time of the writing of this paper her whereabouts and habits are well known to me. She is now a robust woman, doing the work of housekeeper in an apartment house. This experience, while altogether unpleasant and experimental, caused me to take up the use of this powerful drug in all cases, where the mor-

phine or opium, in whatever form it had been taken, was withdrawn, and I assure you that it has furnished me with varied experiences, but none so unpleasant as the one just detailed.

I will detail another case of a prominent man, well known to the profession throughout East Tennessee. He had been in politics for years, a prominent jurist and held other public offices, who had gone to morphine through the alcohol route, and literally to the gutter, from his high political and social position. He was forced into the institution by his sons, after having taken treatment in a number of quack institutions throughout the country, remaining in one of these fourteen months, as well as in some good ethical institution several months. He carried with him letters from superintendents and physicians in charge of these institutions, some of them stating that they believed him to be incurable. He not only took morphine, but a daily quantity of atropin, total one-half grain. This enormous amount of atropin seemed to be as essential to his well-being as the morphine and when his morphine was given without the atropin, he would vomit immediately. He was an unwilling patient from the beginning. The routine belladonna was of no value in this case, as it had been in the case of the woman, and he rounded out his twenty-first day demanding his hypo as he had the first day. I determined to further my experiments with luminal and therefore placed him under its influence. It is needless to say that I proceeded more cautiously than I had with the woman, giving him much smaller quantities to start with and at longer intervals. I found, however, that he would tolerate much larger quantities than had been tolerated by the woman, and it was not until he had the combined action of 40 grains given in a period of two days that he did go to sleep, and at no time during his treatment was he so profoundly asleep that he could not be awakened for the administration of medicine or food. He was kept in a sleeping state for two weeks and, of course, elimination daily kept up as was also the administration of food. At the end of that period he notified me that he would be glad if we would leave off the hypodermics he was receiving, (which were nothing more

than sterile water) as that he didn't longer feel the need of them and that he had about made up his mind that he would like to get well. A week later when I told him that he had gone twenty-one days without the use of morphine and in the meantime he had been on the scales and found that a fourteen-pound gain of flesh was present, he was happy to the extreme and sent for his sons and made a lengthy confession of how he had used the drug for over twenty-one years and had evaded treatments and that for no period during these years he had taken morphine had he been a single day without it until now. He left the institution a week later in good spirits and went into the world and has regained his social standing and is now holding a prominent political office. He has at many times stated to me that his recollections of the action of morphine were nil.

At another time I saw a patient sleep so profoundly that it was a number of days before he could recall who he was and where he had lived prior to coming to the institution, yet he made a splendid recovery and is now enjoying the best of health.

My experience in these early cases taught me much, and one lesson I learned was to handle each case as an individual, and I therefore have no routine treatment to offer the profession with the use of this drug, further than to say it is safe to start women on three grains of luminal; men patients, unless they are alcoholics, on about four grains, and not to give exceeding fifteen grains in any 24 hour period, usually one-half grain per hour will be sufficient, giving magnesium sulphate before breakfast each day. They should be kept in a stupor for six to twelve days. When this rule is adhered to we have seen no toxic symptoms appear. In about seven per cent of these cases a rash will appear, much like that seen in scarlet fever. The best results that I have obtained has been when I used this drug alone. I never give it in combination with other drugs, such as hyoscin or scopolamine, but where rapid sleep is desired, such as in the case of acute alcoholism, I would suggest chloral to be administered some two or three hours ahead of the desired effect of the luminal. I consider this drug a safe one if handled intelligently.

Its analgesic action ensures a painless treatment for the addict and suggests a wide field of usage for this most powerful of all hypnotics. For the addict it is the "Twilight Sleep." I will say that I have now treated 196 opium addicts with this drug. The per cent of cases relieved has been unbelievably high and the morality nil, and the permanency of the relief most gratifying.

I hope at another time to be able to suggest a routine treatment that will be simple and can be administered in the homes of the unfortunate addicts.

FOCAL INFECTIONS.*

By J. B. Blue, M.D.,
Memphis, Tenn.

When one following some special line of work prepares a paper to be read before a body of physicians doing all kinds of work it is not always an easy matter to select a subject that would interest all. However, there is not one of our diverse system but what is interested in focal infections.

The general practitioner, the internist, the gynecologist, the surgeon, the genito-urinary man, and the eye, ear, nose and throat specialist should all to a man feel interested in them. There are few at this day who fail to give this subject thought. If there are skeptics they have but to look about them and give the matter a little consideration and its significance were impressed upon them.

The work done along these lines shows how closely we who treat disease are bound together and that the best good is not accomplished by the individual workers, but is done by the combined efforts of team workers.

The internist refers his rheumatic case for tonsillectomy to destroy the focus. The eye-man sends his iritis patient to the G. U. man to clear up an old prostatitis or seminal vesiculitis. A case of recurrent conjunctivitis is not cured until adenoids and tonsils are removed. These hypothetical cases are all borne out in actual practice and fully illustrate the great amount of benefit to be derived from team work.

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The appreciation of the full significance of focal infections has not been with us long. The association of rheumatism and tonsillitis has been known for years, but just how and what it was has not been known so long.

We have long believed that in miliary tuberculosis there was an original focus from which the more general condition developed. And writers as far back as the fortys of the past century suggested that perhaps some cases of gonorrhoeal eye disease were metastatic.

Of recent time great work has been done on focal infections by Billings, Rosenow, Murphy and others. Billings shows us how these general conditions develop from original focus. Rosenow by his recent work has shown how bacteria undergo transmutation. The knowledge of the transmutability of the streptococcus-pneumococcus group has been a great step forward in this work.

The blood stream is probably the way in which the agents are borne from the original focus to the joints, endocardium, muscles and other organs. And histological examinations of the joint structures, heart valves, etc., show embolic bacterial masses in the terminal arteries. And endothelial proliferation at the place of the embolus closes the lumen of the vessel. Some of these causative bacteria, especially from arthritis deformans grow best in low oxygen content and even anaerobically.¹

Another type of infections to be contrasted with the before mentioned kind are those in which the bacteria grow best in high oxygen content. Of these is the streptococcus viridens, which is a cause of some cases of chronic endocarditis. Here the infection is brought from the original focus by the blood. Streptococcus viridens infections are especially frequent in the infections of the upper respiratory tract, causing infections characterized by a mixed course, but tending to chronicity and frequent recurrence. Cecil found in 89 cases of infections of upper respiratory tract that 56.2 per cent were from streptococcus viridens.

Cecil further states that these cases offer much evidence to prove that infections of serious membranes are secondary to infections of upper air passages.²

Acute rheumatic fever is of focal origin, the tonsils nearly always holding the focus.

As far back as Trousseau the relation between tonsillitis and acute rheumatic fever has been known. That there is a thyroiditis accompanying certain rheumatic fever cases is sure. ³Billings reports three cases of each, having acute rheumatic fever, acute tonsillitis and thyroiditis. Another case he reports of an exophthalmic goiter with chronic tonsillitis and alveolar abscess. This case had goiter two years, muscular tremor for one year and other symptoms, but after removal of tonsils and extracting of teeth, rest and good food, the goiter diminished by half and other symptoms are nearly all gone.

Pyorrhoea alveolaris is another of the focal infections that has of late received a great deal of consideration. Bass and others have demonstrated an endameba present in the pus pockets of these cases, and have used emetin very successfully in their treatment.

That oral sepsis is the cause of anemia is stated as being a fact by Dr. LeFevre.⁴

Some gastric ulcers are claimed by Rosenow to be a result of streptococcus infections from focal infections. The focal infections I wish to especially speak about are those of the nose and throat.

In focal infections of the throat, the tonsils are generally the fellows doing the mischief.

As has been before mentioned, the association between rheumatic fever and tonsillitis has long been known. That this association is a true one hardly anyone will question. Therefore there is a close relationship between rheumatic arthritis and endocarditis with the tonsils. All cases of acute rheumatic fever should have their tonsils examined and a goodly number of these we will find diseased tonsils and that the patients will be rendered less likely to another attack of rheumatic fever and its complications if they are removed.

Harrison in Southern Medical Journal for January, 1915, recommends in acute endocarditis that a tonsillectomy be done to destroy the focus of infection. Theoretically this seems right, provided operation be without danger. At any rate, it would not be bad practice to clean out the tonsillar crypts during the acuteness of the attacks and later do a complete tonsillectomy.

Now nothing but a complete tonsillectomy should be done. To simply shave off a sliver of tonsil with a guillotine is almost worse than nothing being done. A scar will likely seal up matter and keep it where it can be absorbed, when otherwise it might be washed out. It is sometimes difficult enough to get out all of the tonsil by the various methods of enucleation and a very small piece may become pocketed and be the source of infection. Such a case as this I recently saw in a young girl who had a tonsil operation done about one year previously. The right tonsil had been taken completely out, but there was a small piece of the other still in there, way behind the anterior pillar and could not be seen by ordinary examination. I felt sure there was a piece there on account of recurrent abscesses she gave the history of having had. These abscesses had necessitated incision. The small piece of tonsil was removed and the girl gained in weight and lost a cough she had had continually, also stopped having a slight fever that had troubled her for some time.

Authors have long associated chorea and rheumatism. So there must be some relation between the tonsil as a focus of infection in some of these chorea cases.

I wish here to follow Dr. Stucky and enter a protest against such expressions as the "Massacre"⁵ of the tonsils and the like. I firmly believe that more harm has been done by tonsils left that should have been removed than has resulted from taking out apparently healthy tonsils. In my opinion, better take out healthy tonsils than leave a diseased one.

That tonsils are harborers of emdoemeba buccalis, that organism so closely associated with pyorrhoea, has been shown by Smith, Barrett and Middleton, who found it in the tonsils of five out of seventeen cases examined.

B. W. Key, of New York, claims that the tonsils are the cause of certain cases of phlyctenular conjunctivitis.

Also Loeb states that acute nephritis may accompany tonsillitis.

It has been my experience that the man doing general work nearly always tells you, "Yes, the patient has very large tonsils and we want them removed." But frequently he overlooks another type of tonsils that sometimes

does more harm, and that is the submerged tonsil. This type of tonsil may be quite large and yet not appear so. A better view of them and of their condition is obtained by making the patient gag.

An infection of one or more of the nasal sinuses may be the thing standing between the patient and health. A chronic mastoiditis, while giving very little pain, may do the same.

I will not go into detail of cases, but will outline some recent ones.

Several rheumatic cases in which relapses ceased and general improvement of health on removal of tonsils; hoarseness from chronic laryngitis relieved by tonsillectomy; one case of rheumatic endocarditis and frequent mild recurrences of rheumatic fever; very difficult menstruation, requiring one to two days in bed at each epoch; tonsillectomy done, rheumatic pains stopped, menstruation normal; facial eczema from epiphoria; lacrymal obstruction from nasal catarrh relieved by removal of adenoids; a very persistently recurrent conjunctivitis not relieved until adenoids removed.

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1. Billings, Jour. A. M. A., Sept. 12, 1914.
 2. Cecil, Archives Int. Med., Jan., 1915.
 3. Billings, Jour. A. M. A., Sept. 12, 1914.
 4. LeFevre, Laryngoscope, XXIV., No. 6, p. 611.
 5. Stucky, Sou. Med. Jour., Feb., 1915.
 6. B. W. Key, Ophthalmic Record, June, 1914.
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THE TENDENCY TOWARD DRUG NIHILISM.*

By Henry Lockhart, M.D.,
Coalmont, Tenn.

"When in the course of human events" it becomes necessary for Dr. Reuben Redneck to address a meeting such as this, it is a matter of heads or tails who will suffer most, you or Dr. Reuben. It has come to pass that when a Ilayseed M. D. is needed to fill out a program and make a fool of himself no hesitancy is felt in asking me to act the part. The reason is not far to seek. There are few country doctors

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living in the captivity of the State Association and of these few I am about the only one who has been sufficiently tamed and trained to perform in public.

It would be an easy matter to define the words *drug nihilism*, but not so easy to define the attitude of the profession in regard to it. Therefore I have taken the theme, "The Tendency Toward Drug Nihilism," thinking it more fitting and more nearly expressing that about which we intend to talk. We all know that this tendency is abroad in the profession, in some amounting to only a doubt as to the efficacy of drugs in the treatment of disease, while in others it goes so far as to amount to a practical banishment of drugs from the sick room. The causes of this tendency are very apparent, but somewhat numerous.

(1) I would give as the first and perhaps the greatest cause, *the immense number of drugs that have been and are still recommended to us*. This great number of drugs that we find in our heritage handed down to us from our medical ancestors is so chaotic and among them we find such a number that are foolish, which in our advance in learning we are compelled to discard, that it has made Doubting Thomases of us in regard to others, and, as usual, this has been carried to an extreme. It were just as reasonable should we find hypocrites in the church to condemn all the members; just as plausible that because there are blankety fools in the medical profession that won't join organized medicine, and blankety rascals who have joined it, that there are no good physicians.

(2) *The desire to use a specific when using a drug*. Now this desire is a laudable one, but one that, unfortunately, is not easy of fulfillment. Truly, a little learning is a dangerous thing because finding out just how a few drugs act has made fools of us. Laboratory experiments determining definitely just how any drug acts, why it acts thus and so, just how, when and where it is taken up into the system, just what its changes there are, just how it is eliminated, is a consummation devoutly to be wished but which can only come with time and patient study. And here I will venture the assertion that all the drugs that are now used as specific were used for a long time before it was

proven just how they were specific—yes, they were used for a long time *empirically*, if you wish to so call it, for I am not so afraid of the word as a great many. Take, for instance, that best known of all specifics, cinchona. It is commonly stated that the therapeutic use of cinchona began in the treatment of the Countess of Cinchon in Peru, in 1638, for malaria; two hundred and twenty-nine years later, in 1867, Binz observed that in weak solution it killed the paramecium of hay infusion at once. These observations led Binz to the conclusion that malaria is due to a parasite which quinine kills. Over two centuries of the successful use of quinine empirically to be justified by the laboratory! Gentlemen, in that time this drug saved enough shakes if all put together to throw old mother earth out of her orbit. Is it not best then to hold fast to that which we believe to be good, and leave it to time and the laboratory to prove how it is good, and if not, why it is not?

(3) *The rapid advance of surgery and vaccine therapy*. These have been so rapid and brilliant that they have overshadowed the more commonplace drug therapy. Now in what I shall say please do not think for a moment that I am "knocking" either of these branches, for, on the contrary, I must admit they are outstripping us in the race. The surgeon in the good old days was an accommodation, a comfort, a necessity to the general practitioner. In those times if we could not cure a man with drugs we could call in a surgeon and get him to cut out something and then lay his death at the surgeon's door. Now it has come to pass that the common doctor has to get a seventeen-jeweled Elgin move on him, or the surgeon will have it cut out before he gets there and turn the tables and lay the blame on you if you don't drug the patient through. All honor to the surgeon! May he continue to do even more brilliant work! But, because he has attained to such heights, is that any reason why we should sit supinely down and make no advance in our lines? Surely there is yet a place for drugs even in surgical cases. I cannot on this floor make the assertion I recently heard a physician make—that "castor oil had cured more cases of appendicitis than the knife"—but it and other drugs have their uses even

here. Now please do not say to me that the last word has been said in appendicitis, for, believe me, it won't be until nature in its further evolution of man cuts the appendix out permanently, or some reform legislature makes its removal compulsory before the age of, say, two days, or, perhaps better still, prohibits us from being born with one, declaring its possession a nuisance and delegating to the surgeon the power of search and seizure. We country doctors simply *have* to treat appendicitis medically for the simple reason that the country man and woman think a lot of their vermiform appendix. They love it, cherish it, cling to it, are loth to part with it, in fact, simply refuse to give it up, while, on the other hand, the city man seems to have no use for it, is perfectly willing to relinquish all right, title and interest in it, in fact, don't want it—yea, verily, he cheerfully parteth with many beautiful simoleons to get you to take it away.

(4) *The State Journal* "progressive" M. D. Now I believe here is the "nigger in the woodpile." Here is, if not the daddy of drug nihilism, at least the supporter of it. You who read the article in the *Journal* about the "standpatter" and the "progressive" physician will understand what I mean by a progressive, and I want to reiterate what the *Journal* said about the "standpatter." He is just as bad as the other, and had I the time I would pay my respects to him just the same as I do the "progressive." In fact, I believe I will pause long enough to say that he, too, is a cause of drug nihilism. He stands so pat, sits so still, mosses over so thick, content to atrophy, continuing to give from pure cussed no-accountness the obsolete drugs of old for everything; he furnishes such a disgusting example that many flee from him to the other extreme and this other extreme is where your "progressive" shines. Shakespeare could well have said, "All the world's a clock and all the men and women merely the pendulum." Back and forth, back and forth, they swing from one extreme to another. And the medical profession are men and women, and back and forth they swing. When Koch made his discovery of tuberculin they swung and swung big. Everything used tuberculin, often without rime or reason. Naturally, used in this way it fell into disrepute. Then back they

swung until now it is not used half as much as it should be. To refer again to vaccines, the pendulum is swinging too far, everybody's using vaccines, stock, polyvalent, anything, so it is a vaccine and is considered up-to-date. Regardless of shock or strain, despite reaction or effect, thousands of physicians are today using vaccines who never even heard of Wright's positive and negative phase.

This is the kind of empiricism to be condemned; this will inevitably bring vaccines into disrepute. The pendulum will swing back with the "progressive" still in front, for this is a peculiarity about him, he progresses so darned fast you can't tell whether he is coming or going; he swings away from anything just as fast as he swings toward it. Back and forth, to and fro, he swings and the "standpatter" never even looks up as he passes, for he is on the dead center and can't move. Just now the progressive is swinging toward drug nihilism.

(5) *The fear that some professional brother will say that we are practicing empirically.* This actually causes some doctors to have the night terrors, but they are already infected with the bug of progressivism. In the present chaotic condition of our knowledge of the action of drugs we cannot discard a remedy simply because we do not know just how it acts. Take, for instance, iodine in the treatment of syphilis. We used to think that it possessed a specific action, while now we know that this is not the case. Still, the gumma will disappear. Let us see if we can find how and why. Binz and Hinz believed its action to be due to the oxidizing properties of the nascent iodine; Rohmberg suggests that its action may be due to some change in the blood; Muller and Inada state that there is a change in the blood and that this change is due to an alteration in the viscosity of the blood; Determan denies this; various authors ascribe its action to its causing a fall in blood pressure, but Stockman and Charteris say there is no fall; Lehnendorf, in a recent paper, says there is a fall; Forscheimer states that iodine stimulates the lymphatics and increases the nutritive processes and thus prevents the absorption of the disease products; Schumedenberg states that iodine does not exert a specific action on any organ, but causes a change in metabolism and nutritive processes

in general; Jobling and Peterson, in the latest contributions I have seen, contend that it is due to its influence on the antitrypsin of the blood and tissues. So there you are! Take your choice—you will have authority for what you say.

What are you going to do about it? What's the answer? Continue to use iodine empirically, and leave to abler minds to find out how it does what we know it does. As another example of the empirical use of a drug, I am constrained to mention ipecac in the treatment of dysentery. Long years before its worth was proven in the laboratory, long before I ever heard of the amoeba hystolitica, I and many other practitioners drugged our patient with opium until he was too sleepy to vomit even if he did get nauseated, and then gave him ipecac. He got sick, but he got better. Now we have emetine hydrochloride and alcrestia ipecac, but we would not have been justifiable in waiting for these. The answer to the iodine and ipecac problem is the answer to many. Do not throw a fit should some professional brother point his finger and scream "*Empiricism!*" Work earnestly and as knowingly as possible with such tools as are at hand and which have been tried, but for God's sake don't stand pat, but be ever ready to grasp the new. Let the master minds progress, be eager to follow, but first know how.

(6) *In the teaching of therapeutics* we all know there is something vitally wrong. Just what it is and how best remedied is not for me to attempt to say.

(7) *The hospital and trained nurse treatment of disease* as a cause of drug nihilism may sound foolish, but will, I think, be made plain upon thought. Things are different in the city from things rural and in no particular more marked than in the practice of medicine. In the city the well-to-do are in the charge of a trained nurse and the poorer ones in the hospital, where they have proper diet and care. In the sticks this is not the case. In the city Mr. Highliver is fed less and Mr. Poorliver is fed more to the benefit of each. In the country your patient will be fed every bite he can be induced to swallow. In the city Mrs. Smythe becomes pregnant and is attended during confinement by Dr. Browne. In the country Sally

Smith gets in a family way and has a baby and we wait on her. Mrs. Smythe has a trained nurse who attends to her diet, etc., but next day we go to see Sally and find her just finishing a meal of backbones, soup, beans and corn bread. Then it is usually best for us to help out Sally's eliminative organs. In the city Mrs. Smythe's baby arrives at the age of dentition; and of course Sally's child, Jim—for, at that time he may not be the baby—arrives at the same age, but he cuts teeth. The city child at this stage of the game has enterocolitis; his diet is reduced and properly balanced, and he gets all right. But Jim's bowels run off and us poor country cusses of M.D.'s *empirically* have to give castor oil, bismuth and gray powders, because we know that Sally is just as empirically stuffing Jim with fat meat, young Irish potatoes, and other things of equal caloric value.

Most cases of illness will recover with proper diet and care and the city patient has these advantages more than country ones: out near to nature, among the hills and hollows, it is simply up to us to give medicine, in fact, that is what they want with us. These reasons and others tell why the ranks of the drug nihilists are recruited more from the members of the profession in the city than in the country. As I have often said, I do not care about my city brother—he is plenty able to take care of himself—but my brother, Dr. Reuben, needs looking after. This problem of drug therapy more nearly concerns us than it does you. I am compelled to say just here, that over half of the literature on drugs that we get comes from some pharmaceutical house exploiting some proprietary. But permit me to give the devil his dues and say that these same houses are today doing as much or more toward the advancement of drug knowledge than any one else. It is a matter of necessity, not of choice, with us in the country to adhere to drug therapy.

The 8th and last cause of the tendency about which we will talk is the *almost total absence of papers, not only at our state meetings, but county as well, pertaining to drugs*. I am often struck by the remark I hear that "The meeting was all right, but that there was too much surgery on the program." This may be true,

but much as I delight in poking the surgeon, he is not to blame, but, on the contrary, is to be commended. He is forging ahead, doing and achieving, is proud of it, and therefore does not hide his candle under a bushel. On the other hand, the man who must depend upon drugs for not only his success, but for meat and bread as well, sits still, saws wood and says nothing.

But, gentlemen, I am an optimist and I believe that this tendency toward drug nihilism will result in good. The pendulum will swing back, and things which we know to be wrong with the present condition of drug therapy, but which are too numerous to mention, will be righted.

I am a natural born dreamer, having been born and "raised" where geeing and hawing to a flop-eared mule was a boy's principal recreation in summer and taking physical culture with an axe and grubbing hoe his principal diversion in winter. My father used to attend to the awakening features of the dreams, since which time the world has been just as successfully attending to the matter. Still, I love and dare to dream, so I will now tell of a dream I have to forward the knowledge and usefulness of drug therapy. One snowflake cannot make a snow, one grain of sand cannot make a beach, nor can one man do much, but all can do a vast amount.

The idea, roughly, is this: Why cannot every man here, in fact every man in the State Association, be prevailed upon to take up the study of some one or two drugs, or perhaps better, some disease agreed upon and study it for, say, the next ten months? Let him study to the best of his ability its effects in every way of which he is capable. If not able to do this to any great extent, there is no one who cannot note results, then let everyone report to some member selected by this society, say two months before the next meeting, and let him compile these reports and read a paper from them. It seems to me that this paper would be of greater value than most men's individual ideas. To go a step further into dreamland, why could not the various states take this same action and let all the papers read at the state meetings, compiled from all its members, go to some member of the American Medical Association

to be again compiled and read at its meeting?

As an example, let everyone try ichthyol, as I believe that is the "latest" in pellagra, and report; or, as another example, try alcresta ipecac in that curse of the human mouth, pyorrhoea alveolaris. Of course these are merely hints; details would have to be worked out.

Is the dream feasible? Can it be made to come true?

PYLORIC STENOSIS IN INFANTS.*

By Oliver W. Hill, M.D.,
Knoxville, Tenn.

I was emboldened to attempt to write on this rather unusual subject because of the fact that it is so seldom recognized by the general practitioner. The symptoms are usually attributed to some infectious disease or to the mother's milk not agreeing with the infant, causing changes from one food to another. The child finally becomes better in spite of these changes or wears out and dies undiagnosed.

A close review of the literature on this subject reveals more discrepancies and differences of opinion than that of any other subject which I have had occasion to investigate. While in most phases of the question there is an honest difference of opinion, in some cases I am convinced that there is a wilful disregard of facts established by other investigators, while in others it is mostly due to a blissful ignorance of the literature.

The last word is yet to be spoken on this subject, and those who have had the largest experience with this peculiar malady have, I find, changed their minds from time to time. The whole question, as to the pathogenesis, is still an open one. As to whether the stenosis causes spasm, or the spasm causes the stenosis is a very much mooted question. It is exceedingly interesting to note the different conclusions arrived at and the devious ways of reasoning. Some hold that the condition should be treated medically, others that it is a purely surgical disease. Many claim that you can al-

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ways detect a tumor at the pylorous, even in the enterme of the spasm, which is, in my opinion, a misstatement of facts based upon ignorance.

However, there is one symptom on which there is unanimity of opinion, that is, visible gastric peristalsis. It is true that it may not be detected on the first examination, or even the second. It calls to mind the importance of examining the patient's abdomen more carefully than we usually do. We can learn much by careful, watchful waiting on a little fellow, when we are uncertain of the malady from which he is suffering. I recall cases where I have noted the phenomenon after careful watching, when I had come to the conclusion that it did not exist. I am very certain that visible peristalsis is seen in the majority of cases which can hardly be mistaken for intestinal peristalsis. All waves I have observed travel from left to right, at times two or more closely following each other. Antiperistalsis has been noted by some writers.

LaFetra has been able to produce peristalsis artificially in the new-born by instilling 2 C.C. of 4% H C into the stomach. Hess also reports this observation. However, Holt, Still, Kerley and others lay great stress on the peristalsis, stating that they would hesitate to make a diagnosis without it. My own experience leads me to believe that the whole condition is overlooked, many times by good clinicians, because the method of examining the patient for the two characteristic signs is poorly understood. In the first place, the time of examination is important, with reference to taking food, having the child as quiet as possible, and having warm hands. I have seen the cessation of the movement a number of times because of rigidity of the abdominal muscles due to reflex from cold fingers of the examining physician. The vomiting is very characteristic, the child vomiting large quantities, two or three feedings at one time. They will sometimes vomit while attempting to nurse, the milk being returned as fast as it is ingested, while if you will wait a short time, to allow the stomach to become quiet, you may be able to give the remainder of the feeding without interruption. Some cases suffer much pain, others apparently none. I have been able, in a comparatively

small number of my cases, to demonstrate a palpable tumor. I think the average observation is about 25%. Of 415 cases collected by Ibrahim, a tumor was found in 86, while of 39 cases seen by four surgeons, 39 tumors were demonstrated. The discrepancy is possibly due to the fact that the latter is apt to see only the most severe types, which are emaciated and of long standing, with the consequent hypertrophy. And you must have observed the exaggerated imaginative power of the surgeon when tumor hunting. The tumor is usually found midway between the navel and free border of the ribs, a short distance to the right of the median line. It seems to change position at times, also consistency, at one time being much firmer than at others; in fact, feeling softer or firmer while the examining hand is in contact. It seems to me that this is evidence that the finding of the tumor does not necessarily mean that there is hypertrophic stenosis; rather that the spasm itself may cause a tumor.

The pathology of the post-mortem findings is practically constant, there being a fold of the mucous membrane at the canal and a varying degree of hypertrophy of muscular tissue.

The diagnosis is not difficult, if pursued with patience and intelligence. The symptom complex, vomiting, visible peristalsis, palpable pyloric tumor, are pathognomonic of this condition. Even in the absence of the palpable tumor, with peristalsis, a diagnosis of pyloric stenosis can be made in the breast-fed child when the vomiting is persistent, the loss of weight progressive, the analysis of the mother's milk showing a normal percentage, and when all usual means fail to give moderate relief. As the treatment depends not on the nature of the stenosis, but on the degree of the stenosis, it seems to me that there is very little use in wasting energy on attempting to differentiate the spasm cases from those of hypertrophy.

One cause of spasm, it has occurred to me, could possibly be due to lack of co-ordination on the part of the undeveloped nervous system. We know that the stomach has two extrenuous supplies of nervous impulse, the splanchnics and the pneumogastric; also some internal fibers. The latter fact is proven by observing that an excised stomach will continue to contract for some time if kept warm. We also know that

there are both afferent and efferent nerves. All of us have been amused by the inordinate movement of the hands and feet and facial muscles of the infant, as Shakespeare so aptly described it, "Meuling and pukeing in his nurse's arms," and by this very incoordination developed into a more or less habit spasm causing some hypertrophy, which in turn aggravates the spasm by interfering with the normal passage of the food through the pylorus.

Treatment: The treatment may be medical or surgical, depending on the severity and the environment of the case. As in most medical conditions, the case treated in institutions stands a considerable smaller chance of recovery than those in private practice. I have personally seen only three cases go to operation. However, I have seen two or three die when operation was refused. Of eleven cases of varied severity in my private practice all have recovered save one. It is most remarkable how many cases of pyloric stenosis have a tendency to get well in spite of all treatment. There seems to be a marked turning point for the better in most cases. A case often loses grounds slowly for three or four weeks, then suddenly begins to improve on the same measures employed before.

I will not attempt to take up the surgical side, other than to state that you should not postpone operation, when inevitable, until the patient is so emaciated and depleted that there is an increased or exaggerated risk. A very good plan is to have a surgeon in consultation occasionally during the treatment.

The object of medical treatment is, of course, first to allay the vomiting, by regulating the amount and frequency of feeding and by systematic stomach washing. Second, to increase the tolerance of the stomach for larger quantities of food. Third, to increase the strength and quantity until the infant receives a sufficient number of calories to insure normal development.

In my hands antacids have been found very useful, both as a stomach lavage in five per cent solution of bicarbonate of soda, and in addition to cow's milk, where mother's milk is not available, or in cases where the "child does not agree with human milk," as was the apt expression used by a mother not long since in

discussing her infant who had tried four or five wet nurses with dismal failures on all occasions. The child responded rapidly to a low fat modification of cow's milk. I have found that these cases do much better, as a rule, on low fat and sometimes on a very low sugar per cent. However, each case is an exception to every rule before you have finished with it. One of the things to be remembered in the treatment is not to be discouraged, nor to decide that the child has a gastro-intestinal infection on account of not being able to discriminate between a starvation stool and an infectious stool. It is easy to be wise after the fact, in most instances, but for me in these cases it has not been so. In the majority of patients that I have been so fortunate as to treat, I am not able to say just what did prove to be the master-key; after all, I should say that patience is perhaps the most necessary attribute to successful management of these cases.

Careful stomach washing in the worst cases sometimes produces marvelous results, as they will often retain food introduced by the stomach tube after a lavage that otherwise they will immediately vomit. In children this can be done with much less discomfort and danger than is usually supposed. As proof of this fact a rather small per cent. of physicians use stomach tubes enough to become at all expert, and yet you seldom, if ever, hear of any accident with this procedure. In fact, it is easier to pass it in the infant than in other children or adults.

Briefly, the treatment that has given me best results is as follows: Wash the stomach carefully, allow the organ to rest for twenty four hours, giving, during this time, distilled water. Begin with a weak protein solution such as whey, diluted beef juice, commercial peptoids, etc. Sometimes one will be borne well, while another will not be tolerated. Egg albumen has not been very successfully used in my hands. Gradually increase your carbohydrates and fats until you get response and a gain in weight. Do not be discouraged if your vomiting continues after your gain of weight is noticeable, as it will, barring accidents, gradually disappear after a few months, provided you are able to keep your increased weight going. Again, don't abandon a plan of feeding be-

cause your patient does not gain immediately. Be satisfied with a stationary weight for a few days. You sometimes meet with a great difficulty in controlling the parents at this juncture, as they are always anxious for immediate results. Don't increase your per cent. of fats too rapidly, as you may undo much good accomplished by instigating a fermentative condition which may merge into an irritation of the gastric mucous membrane, then to inflammation of the latter, and more trouble.

Finally, be patient, persistent and persevering, and may the good Lord help you.

A PLEA FOR A MORE CLOSELY ORGANIZED MEDICAL PROFESSION.*

By R. E. L. Smith, M.D.,
Doyle, Tenn.

You will pardon me, I hope, for writing on this subject, but seeing the great need of unity and co-operation as well as enjoying the privilege of living in a county that is perfectly organized and witnessing the salutary influence accruing from the same, I am constrained to ask you to forbear with me a little while.

There is something radically wrong somewhere. Whence comes so many adverse criticisms of the medical fraternity? If we advise even a sanitary precaution for the benefit of the town, city, county, state or nation you will always hear a howl come from some quarter.

Should doctors suggest or venture an attempt to have some measure enacted into law that is purely for the protection of the people against quackery, fraud and the like the howl comes loud and strong. Whence cometh it? I dare say that a large per cent comes from our own ranks. Some doctor, who may or may not be in the organization, full of envy and covetousness and selfish to the highest degree, gets out and talks before those who will listen, soon creates a sentiment with certain ones and the ball is started to rolling, gathers moss and soon assumes a large proportion, and the measure is thwarted or modified until one would

not be able to recognize it by the time it's passed.

Doctors, and when I say doctors, I mean doctors, not degenerates, are patriotic, self-sacrificing, doing things for the people at large that save them money, untold suffering, misery and want, by preventing disease. These conditions above referred to are quite discouraging to good men. Sometimes, I think, it would be well to turn the whole world loose to practice medicine until the people themselves get to the point they will cry out for help. This, however, would not be right. We must continue to perpetuate the high motives and lofty ideals of the most worthy and most noble profession on earth.

We must remember that every principle has its opposite. Right is opposed by wrong and will be while time lasts. Every business or profession has its organization, and must have to be successful. The old adages, "That in union there is strength," and "United we stand, divided we fall," are true utterances. Couched in these are union, co-operation, charity, toleration for one another's peculiarities, faults, etc.

Many are the reasons that lead to the necessity of organization in a general way. Societies like the Upper Cumberland are very useful and have for their object *solely* the improvement of their members. So we can quite properly belong to them for two legitimate reasons; one, to increase our knowledge; the other, to inspire us to better work. These two commodities are so precious that if we can get either, in a very slight degree, we will not begrudge the time and energy spent in attending the meetings, and still less the paltry sum expended in initiation and for annual dues.

Our county, state and national societies rest on an entirely different basis. They are the *visible* body of the medical profession. Each one of us owes more to the medical profession than we will ever repay. We can repay in part by supporting and so far as in us lies, improving the *official* societies. Every reputable physician should be a member of these, quite without respect to any good they may do him personally. No doctor can work without daily being benefited by the fact that other doctors exist. Such is the dependence of man-

*Read before Upper Cumberland Medical Society and published at request of entire Society.

kind. He uses the instrument of one, the serum of another, cleanses himself with the output of still another brain. For this use of other's brains medical societies have been formed.

If benefit has come from the work of other men, by word of mouth, by instrument or by example, in the society is the place to get the fullest benefit of the same. The Medical Society is the doctor's "clearing house." Your mite, however small, is adequate, give it freely. Anything you have, unload it and carry home the wisdom of all others, then. The exchange is fair. None gave more than you, yet all took more than they deposited.

Men of the same pursuit feel the need of getting together to discuss common problems, to exchange views and experiments and to gain inspiration to be better workers. It is this necessity that brings business and professional men together.

What profession has more problems to meet every hour in the day than the medical? First, the problems pertaining to medical practice in general, the constant changing in the science and art of practice, the learning and the unlearning of supposed truths, the ever shifting field of practice, the transition from old to new conceptions each give rise to new problems which must be solved only by free discussion and interchange of ideas and experiences. If the young doctor brings his theory and the old doctor brings his mature experience, they swap, each profiting by the deal.

The county society, therefore is the doctor's exchange. A seat in this exchange is, or should be, as valuable as in the stock market, for a profitable deal often means success and this is the only kind of stock—the stock of knowledge—that doctors should deal in. Business men often get together to protect themselves from unfair competition or other conditions inimical to their business interest. Medical practice is a business and requires the same kind of guardianship. The unpaid doctor, the cheap doctor, the lodge doctor, the school with low standard of medical education, the quack, the fakir, the patent medicine man, the quack druggist, these are the enemies of the legitimate practitioner. These enemies we can only combat by combining our forces. The county society is the headquarters of our fighting army.

Intelligent, broad-minded men often get together to discuss and take action on matters pertaining to public welfare. They take up politics, industrial conditions and other social problems, and by their discussion and co-operative action frequently mould public opinion and help direct public policy. Is there any other profession that can boast of a larger number of public-spirited men than the medical profession? Who looks after the health of the community, who makes the town and city habitable, who saves the babies from untimely death? The doctor. Who transformed the pest holes into summer resorts, who made commerce between these same pest holes and the rest of the world possible? Who brought about the successful issue of the greatest engineering undertaking the world has ever witnessed? The doctor. With such great achievements to our credit, it is eminently proper for doctors to get together to encourage this social service. The medical society then should be their civic center. During their busy hours, doctors have no time or opportunity to meet in a social way, hence opportunities should be arranged for by which this gap may be filled in. Such an opportunity is furnished in the medical societies. Here we can meet for friendly intercourse, come to know each other better, see more good in each other, cut out envy, strife and discord and not go through life as if perfect strangers.

There are three sources from which physicians may continue to gain information pertaining to their profession—from reading, from experience, and from contact with other physicians. The medical organizations, most notably the county societies, furnish the three sources. Think of a man who has graduated in medicine, never reading the literature of the day, who never comes in contact with other physicians! What will he ever amount to? The answer is evident.

In conclusion, let us be members of the organizations pertaining to our noble profession, let us grow as it grows, and spread the broad mantle of charity around each other, treat each other as brothers and not as strangers, and let loyalty be the predominant trait in our character. No organization can survive in these days of keen competition and do the things that result in its wisest usefulness unless its mem-

bers are loyal. This is certainly true of the county society. What shall we say in defense of those members who have what standing they possess as physicians and surgeons *because of the existence of an organized profession*, and who at the same time go about criticising the county society, the state society, and the A. M. A. simply because they have some pet idea of their own that has not yet been adopted by these organizations?

Let's take membership in the county society and be loyal to it.

Let's put time and money into it and not go round telling those who will listen that the medical societies are obsolete and not meeting the needs of the doctors.

Don't let's tear down the only thing that can make us better.

Let's stand by the thing and the only thing that can enable us to keep the position we now have, or gives promise of leading in the fight for better things soon to come.

Rocky roads are ahead of us all. The organizations we have will accomplish things that no man nor set of men can accomplish working alone.

If I shall have said a word that will stimulate some one to awaken to the great need of the day I shall feel that my effort has not been in vain.

DRUGS AND THEIR ADMINISTRATION.*

By Herman Hawkins, M.D.,
Jackson, Tenn.

Drug is from a Greek word meaning dry, having reference originally to dried plants from which medicines were obtained. In the modern sense a drug is any agent given internally as a remedy for the treatment of disease.

Man has used drugs from remote antiquity, obtaining them from the vegetable, animal and mineral kingdoms. The first two are known as organic and the last as inorganic. The first drugs were of vegetable origin, used empirically. This method still prevails to an unjustifiable degree—yet is not without some

show of reason. In the first place, out of the long list of remedies from which to choose, comparatively few are fully known insofar as their complete range of action is concerned. Where the action of a remedy uniformly meets certain indications in the treatment of a given diseased state, use of that remedy is certainly correct, even if we do not know how it acts. Malaria was successfully cured by cinchona bark or some of its derivatives just as certainly before the cause of malaria was known or how quinine acts as it is now. It is a method, however, easily abused, less and less excusable as the list of thoroughly studied drugs is added to. I am inclined to believe the principle reason for the continued empirical employment of drugs so generally noticed is that so few of us really know much about them. Take opium as an example. It has been a celebrated remedy for hundreds of years. It is administered in some form perhaps more universally than any other. It would appear that we would be perfectly familiar not only with the whole therapeutic range of opium and its derivatives so far as these have been investigated, but also with the history of the plant and what it has furnished to *Materia Medica*—but are we? Here are some things provided by this marvelous plant we should know of. It furnishes, besides protein bodies, sugar, gum, resin, salts and organic acids, twenty-two primary alkaloids, namely: morphine, 1804; narcotin, 1817; codein, 1832; narcein, 1832; thebain and pseudo-morphine, 1835; papaverin, 1848; cryptopin, 1857; gnoscopin, 1878; xanthalin, 1893; codomin, laudanin, hydrocotamin, 1871; protopin, 1872; oxynarcotin, 1875; tritopin, 1890; laudanin, 1894; pseudopapaverin and papaveramin, 1903, and a number of derivatives, among which I mention heroin, apomorphia, apocodein, dionin and peronin.

Morphie was the first alkaloid discovered and is the principal one, yet others are valuable and all have some physiological action and therapeutic value. I take it you will agree with the statement that the most of us have but little more than a superficial knowledge of well known and often used drugs, and it is also very evident we would be more successful in practice if we knew our *materia medica* better. A carpenter can use a square without a

*Read before the West Tennessee Medical and Surgical Association at Dyersburg, May 19, 1915.

knowledge of the scale stamped upon the blade, but it would be foolish to say he could make use of the full possibilities of the tool without it. We are in the same class when we use drugs with but a superficial knowledge of their full scope of action. I have given a reason why the empirical administration of a remedy is not altogether wrong, yet it is easy to see how this method lends itself to the encouragement of mythical and superstitious powers being attributed to drugs. Witness the unbounded confidence displayed in the marvelous potency of exploited medicines which scientifically we know to be inert or virtually so. This credulity of the people has been fostered from time immemorial by the charlatanism of every age and perhaps never more so than at this present time of real scientific knowledge.

Pharmacy is the art of extracting, preserving and preparing drugs for use from the original materials. Chemistry is the mother of pharmacy and drug development. This statement brings us to the consideration of methods of preparation.

Roughly, we may say the organic drugs from the vegetable and animal kingdoms are composed of inorganic materials such as water, gases and salts, but chiefly of organic compounds or proximate principals. These we may divide into insoluble and soluble groups. The cell walls of plants are intractable to ordinary solvents, yet find a place among the list of drugs; as for example cellulose in the form of cotton, from which is obtained collodion. Destructive distillation of these insoluble constituents yields acetic acid, tar, creosote and wood alcohol. Their natural decomposition gives coal tar, amber and many other substances.

From the soluble constituents are obtained many active principles, carbohydrates, alkaloids, glucosides, organic acids, resins, fixed oils, fats, waxes, volatile oils and formulas. Water, alcohol, chloroform and ether are among the solvents used, and various processes are employed in the separation and preservation of the numerous constituents of even a single plant.

Alkaloids are organic basic substances existing usually in combination with organic acids.

They combine with acids to form crystalline salts soluble in water. They are decomposed by alkalies and precipitated from solution by several reagents, iodine being particularly active in this regard. While usually occurring as crystalline solids, a few are liquid, as pilocarpine, muscarine, spartein and pelletierine. They all have powerful physical action more or less resembling that of ptomaines. This roughly indicates how much we are indebted to chemistry for our drugs. If you would more fully appreciate its value, consider the numerous synthetic preparations available and the amazing multiplicity of derivatives from coal tar, so valuable in medicine, and the arts and commerce as well.

Drugs are classified in groups according to their physiological and therapeutic action, as narcotics, stimulants, anodynes, diuretics and the like, as fully set forth in all our text books on the subject.

There is another class of remedies distinctly of modern development included under the name drugs which must be mentioned, though it is a long stretch from the original meaning of the word to serum therapy, embracing under this term bacterins, or vaccines, serums and toxins. Time limitation permits no more than the bare statement of a few facts on this division of the subject, which in justice requires a special paper for proper treatment. Vaccines or bacterins are suspensions in physiological salt solutions, of killed pathogenic bacteria. Serums imply the clear liquid separated from the clot during the process of blood coagulation, from an animal which has been subjected to immunizing treatment with bacteria or their products. Toxins are metabolic products of pathogenic bacteria which, injected into a suitable animal organism, are capable of inciting the elaboration of antibodies. If you remember the prefix "anti" is applied to serums because they contain antibodies, and the bacteria or vaccines do not you will avoid some mental confusion on the names of these preparations. The dose is measurable by units. An antitoxin unit is capable of neutralizing an amount of toxin, or bacterial poison that is in turn measurable by its fatal effect on a guinea pig weighing 250 grammes, in the presence of a standard immunity unit as furnished by the government.

Still another distinct class should be mentioned, namely, glandular extracts, but time will not permit more than the simple mention of this class.

The second division of my subject deals with the administration of drugs. They may be given by mouth, by rectum, through the respiratory tract, into the blood stream by veins, into the subcutaneous cellular tissue, into muscular tissue, through the skin, by absorption, through eye or tongue and by electrolysis. A drop of aconite on the tongue or solution of cocaine in the eye will have immediate effect on the individual. By mouth is the common way, though the route selected governs the effect of some drugs, for example, apomorphia by mouth is a sedative expectorant, the same dose hypodermically is a powerful emetic without effect on the respiratory tract. Strychnine by rectum is said to act more powerfully than the same dose by mouth. Whatever the mode of administration the important point is to know your drug and to know what to expect from it however exhibited.

I have referred to the general lack of drug knowledge and I might add most of us know less about how to give them than we do about the drugs themselves; yet after selection of proper remedy the dosage and interval of administration may be better determining factors between success or failure in a given case. Different results are obtained from large and small doses of the same drug. In small doses calomel is alterative, in large doses cathartic; ipecac in small doses controls vomiting, in large doses is emetic. It is likewise true that the time of elimination differs with different drugs. If this fact is disregarded, untoward effects due to cumulative action are easily produced. A few concrete examples may impress the point. Digitalis is slowly eliminated, hence, the interval of time between doses should be six or eight hours. On the other hand, nitro glycerine is rapidly eliminated and must be repeated frequently if effect is maintained. Again, quinine will not prevent a malarial attack

unless it meets the plasmodium in the blood during sporulation, hence, must be given with this in view. The primary effect of a drug given in a small dose is in the nature of a stimulation of some one organ or system. Rapid repetition or increased size of dose produces remote effects on other organs and systems not influenced at first or but slightly so. Moreover overdosage tends to the opposition of stimulation—depression going on to exhaustion. There is a place for the massive dose, but the habitual routine use of such is contrary to a proper conception of therapeutic skill. Anders advises massive doses of strychnine in the crisis of pneumonia, but he just as positively condemns its use in this way before the stress and strain of that period of the disease approaches.

Again, an acute illness requires the frequent repetition of the selected remedy—with due regard to its time of elimination—in order that its action may be maintained in accord with the progress of the disease. On the other hand, a chronic disease demands an entirely different method of drug administration.

A lack of confidence in drugs has been fashionable in the past few years. I have heard it voiced on the floor of this Association on more than one occasion. Whenever a man says the tools he daily uses to make his living with are worthless, I conclude it is the workman and not the tools at fault. Furthermore, I think the self-respect of such an one would demand his retirement from the profession, or the restriction of his labors to some branch of it which does not include the treatment of the sick. I do not advocate a credulous faith in every statement made by the detail man who visits your office. Indeed, much of our Pharmacopeia might be advantageously eliminated. We would still have a long list of time tried, scientifically proven remedies whose potency cannot be questioned. Moreover the list of such is growing. If these are thoroughly studied and skillfully used you may justly claim a right to the title conferred in your diploma of "Doctor of Medicine."

KIDNEY COLIC.*

By O. S. McCown, M.D.

Surgeon Memphis City Hospital, Associate
Surgeon Lucy Brinkley Hospital, Genito-
Urinary Surgeon St. Joseph's
Hospital, Memphis, Tenn.

Kidney colic is caused by obstruction at the outlet of the kidney pelvis or in the ureter, causing distention of the pelvis and proximal portion of the ureter and violent contraction of the muscular wall of the pelvis and ureter in an effort to overcome the obstruction.

I am taking up the subject from the standpoint of pain, because this is usually a prominent symptom some time during the course of each case of ureteral obstruction, and because there is a popular belief that renal colic is always due to kidney or ureteral stone. I will say here that not over ten per cent of the cases of true kidney colic seen by me are caused by stone. On the other hand, many cases of stone do not cause colic because they are so located as not to cause obstruction.

L. Frank (*Interstate Medical Journal*, 1914, vol. xxi, page 1209) enumerates the following eleven causes of ureteral obstruction:

1. Calculi renal or ureteral. Diagnosed by X-ray, cystoscopy and ureteral catheterization.

2. The so-called congenital valve occurring near the ureterorenal juncture. Diagnosed only at operation or autopsy; very rare.

3. Kinking with stenosis of the ureter from prolapse of the kidney or elongation of the ureter. Diagnosed by physical examination and pyelography.

4. Anomalous anatomic development. Rare and usually only diagnosed at operation or necropsy.

5. Kinking of the ureter from displacement of the ureter by pressure of neoplasms including the gravid uterus.

6. Extension of inflammatory exudate and adhesions from appendicitis.

7. Angulation and displacement of the ureter from exaggerated viceroptosis.

8. Extension of inflammation from infection of the ureteral wall.

9. The so-called pus-obstruction from pyelitis.

10. Ascending infection from cystitis. This type is obviously rare, and its diagnosis depends upon exclusion of other causes.

11. Intussusception from previous obstruction with dilatation of the proximal ureter.

Several of the causes mentioned above are necessarily very rare, but this is the only paper which has come under my notice attempting to name the causes of ureteral obstruction other than stone. For practical purposes I would consolidate several of Frank's divisions and add several not mentioned by him. As a guide in diagnosis and treatment I would offer the following causes of ureteral obstruction and kidney colic, as a good working outline, mentioning them in order of probable frequency.

1. Pyelitis, usually due to colon bacillus infection, occasionally gonococcus, tubercle, or other infection. Diagnosed by ureteral catheterization, microscopic and bacteriologic examination of the urines separately.

2. Stone either in the pelvis of the kidney or ureter. Diagnosis chiefly dependent upon the X-ray, but aided by cystoscope and ureteral catheters.

3. Ptoxis of the kidney, with or without general visceroptosis. Diagnosed by physical examination and X-ray.

4. Occlusion of the ureter by intra-abdominal inflammatory conditions, tumors, etc., often complicated with pyelitis. Diagnosed from history, physical examination and cystoscopy, with ureteral catheterization. Treatment should be directed first to the primary trouble.

5. Hemorrhage of renal origin with clots blocking ureter. Diagnosed by ureteral catheterization. Treatment depending upon cause of hemorrhage.

6. Construction of the ureter by aberrant blood vessels entering the lower pole of the kidney and stretching across the ureter. (*Leguere ann, des, mal, des, org, genito-urin.*, 1904, xxii, 1361; *Elkhorn arch, klin, chir*, 1907, lxxxii., 955; *Mayo, Braasch, ii. McCarty, Journal A. M. A.*, May 1, ii. 19093. Diag-

*Read at meeting of West Tennessee Medical and Surgical Association, May, 1915.

nosed by history, ureteral catheterization and pyelography.

7. Obstruction at the ureter-pelvic junction by papilloma of pelvis of kidney, as in the specimen here shown. Exact diagnosis impossible except at operation or autopsy. The case from which this specimen came was a woman seventy-three years old and a tentative diagnosis of tumor of the right kidney was made because of right-sided kidney hemorrhage and mild renal colic.

This is not offered as an absolutely complete tabulation of all the possible causes of renal or ureteral obstruction, but it does include the common causes and also some of the unusual causes. A moment's consideration will show us that two or more of these causes may be present in the same patient at the same time; for instance, taking the two which head the list, stone and infection. In my experience, pyelitis causes kidney colic at least five or six times as often as stone, and when there is a stone present there is usually infection also. This seems to me to give weight to the idea suggested by Thomas R. Brown (*Journal A. M. A.*, 1901, xxxvi., 1395), and greatly amplified by many since, that infection is the chief causation of renal calculus. There may be infection, stone and renal hemorrhage all operating to cause colic in the same patient, or there may be papilloma of the renal pelvis and hemorrhage. In the case of papilloma mentioned above, however, the colic was, in my opinion, due solely to blocking of the pelvic outlet by the tumor, as there were no clots. Infection and external pressure may be combined, as in the pyelitis of pregnancy. So there may be almost any combination of the causes tabulated above.

The idea that renal or ureteral stone is the predominating and almost the only cause of renal colic has become so prevalent and so firmly fixed with most of us that the other much more frequent and equally serious causes are often overlooked, and consequently the patients go without proper treatment.

The X-ray is our chief reliance for the diagnosis of renal or ureteral calculus, and, according to Dr. Lawrence, is 96 per cent (plus) sure. When a patient comes with a history

suggesting renal colic, always have an X-ray made, but if it should be negative do not consider that you have done your whole diagnostic duty and decide upon this alone that the kidney is not the site of the trouble, and operate for appendicitis or gall stones.

A large percentage of the kidney cases that come to me have already had an appendectomy done, and some have had the gall bladder drained without relief from the attacks of colic and other symptoms. A few have had first an appendectomy at one sitting and a gall bladder drainage without finding gall stones at another, and still no relief.

It would make this paper too long for an occasion of this kind to go fully into the differential diagnosis of these various causes of kidney colic, but it is worth while to lay stress upon the fact that kidney colic is much more often due to other causes than to stone.

Seventy-five per cent of my cases are due to pyelitis, and while many cases of acute pyelitis without stone will get well under medical treatment, those that persist and become chronic under medical treatment will just as surely destroy the kidney and wreck the patient's health as will the cases of stone. In fact, it is in many cases the associated infection in kidney and ureteral stone that does the chief damage.

Pyelitis without stone is amenable to treatment by ureteral catheterization and irrigation of the pelvis of the kidney and ureter by incision and drainage, or by nephrectomy, depending upon conditions present in the individual case. Its diagnosis by cystoscopy and ureteral catheterization and microscopic and bacteriologic examination of the separate kidney urines can be made with certainty, and these patients should have the benefit of a correct diagnosis and proper treatment. In unilateral tuberculosis nephrectomy should be done as soon as the diagnosis is established.

The diagnosis of the less frequent forms of ureteral obstruction which cause colic is dependent chiefly upon ureteral catheterization with or without pyelography. Success in their treatment will usually require surgical removal of the obstruction, but each case must be investigated thoroughly and treat-

ment based upon the findings in the individual case.

It is already one of the established principles of kidney surgery that all kidney and ureteral stones should be removed, unless there is some special contraindication to operation. Those located in the kidney substance or pelvis should be removed by nephrectomy or pyelotomy. In ureteral stone dilatation of the ureter with catheters or bougies, the injection of sterile oil, and other conservative cystoscopic measures should be tried faithfully, and if unsuccessful, then radical operation should be resorted to.

THE NEW PRACTICE ACT.

A Bill to be entitled: "An Act to provide for the preliminary examination of all persons who may hereafter desire to practice medicine, surgery, osteopathy, or any other form of the healing art, in the State of Tennessee; to create a State Board of preliminary examination, and to define its powers and duties; to provide compensation for the members thereof; and to prescribe penalties for all violations of this Act."

Section 1. Be it enacted by the General Assembly of the State of Tennessee, That immediately upon the passage of this Act, the Governor shall appoint three educators of recognized standing, one from each of the three grand divisions of the state, who shall constitute the State Board of Preliminary Examination, the members of which shall hold office for two, four and six years, respectively, and until their successors are appointed and qualified. The term of each member shall be stated on the face of the certificate to his appointment, and all vacancies that may occur in said Board, by death, resignation or otherwise shall be filled by the Governor.

Within thirty (30) days after the first members of said Board shall have been appointed, the Board shall organize by electing one of its members as Chairman and another as Secretary-Treasurer, and it shall adopt and use a seal which shall be affixed to all certificates which may be issued by the Board as provided by this Act.

The Board shall have the power to make and enforce all rules and regulations proper and

necessary for its conduct, not in conflict with the terms and provisions of this Act, and it shall hold meetings at such times and places as to it may seem proper. Provided, however, that said Board shall meet at least once a year in Nashville at a suitable place after the commencement exercises of the various medical schools of the State of Tennessee, for the purpose of conducting an examination of all persons who may desire to practice medicine, surgery, and osteopathy, or any other form of the healing art in Tennessee.

A fee of five (5) dollars shall be paid by every applicant taking the preliminary examination, as in this Act provided, and the expenses of the State Board of Preliminary Examination, as well as the compensation of its members, shall be paid out of the sums so paid by such applicants. The compensation of each member of the Board shall be fixed by its resolution or by-law. The provisions of this Act shall not be construed or held to apply to any person who was practicing at the time of the passage of this Act, or who had practiced at any time during the year just preceding the passage of this Act, medicine, surgery, osteopathy, or any other form of the healing art in the State of Tennessee.

Provided further, that this Act shall not apply to Christian Science or to Christian Science practitioners.

Sec. 2. Be it further enacted, That before any person shall hereafter practice medicine, surgery, osteopathy, or any other form of the healing art, in the State of Tennessee, or shall treat for compensation by any means whatsoever any disease of the body or mind, or any ailment, injury or malformation of the human body, he or she shall first present himself or herself to the State Board of Preliminary Examination, or shall transmit to said Board his or her general educational credentials; provided, however, that any person shall be entitled, prior to entering a medical school, or during his or her attendance therein, to register with the State Board of Preliminary Examinations the high school diploma or its equivalent as is by this Act provided, and shall satisfy such Board that he or she is a person of good moral character, has received a diploma or its equivalent from some reputable and rec-

ognized high school, and that he or she has received a diploma from some reputable and recognized school of medicine, surgery, osteopathy, or other school teaching any form of the healing art, in which is given a course of at least thirty-two (32) months, extending over a period of four years, and which course shall embrace the study of Anatomy, Physiology, Pathology, Surgery, Gynecology, Obstetrics, Chemistry, Bacteriology, Symptomatology, Diagnosis, Hygiene and Sanitation; provided, however, that after the year 1919 all applicants of the regular school of medicine shall have a diploma from a medical school whose curriculum is as high as that of the Medical Department of the University of Tennessee, as published at present in its catalogue; provided further, that the provisions of this Act requiring a preliminary examination shall not extend to or embrace any persons who desire to practice medicine, surgery, osteopathy, or any other form of the healing art in Tennessee, who are graduates of reputable professional schools and who have had at least five (5) years' professional experience in other states of the United States.

The State Board of Preliminary Examination, if satisfied that the applicants possess the qualifications as prescribed by this Act, shall issue to such applicants a certificate, signed by the Chairman and countersigned by the Secretary of the Board and under the official seal of the Board, which certificate shall state that the person to whom it is issued is qualified to stand the professional examination that is now, or may be hereafter, required by law before the State Board of Medical Examiners, or the State Osteopathic Examining Board, and nothing in this Act contained shall be construed as abolishing or interfering with the professional examination that is now, or may be hereafter, required by law, as it is the intention of this Act only to test and certify the qualifications of applicants before they can legally take the professional examination required by law; provided, however, if for any reason the State Board of Preliminary Examination is not satisfied that any applicant possesses the qualifications required by this Act, it may cause such applicant to be examined as to his or her general educational qualifica-

tions by a committee to be appointed by the State Board of Preliminary Examination, and this examination may be held, even though such applicant possess the diploma or equivalent thereof, as is by this Act provided.

Sec. 3. Be it further enacted, that no professional examination shall be given by the State Board of Medical Examiners or by the State Osteopathic Examining Board, or by any other medical or surgical examining Board, unless the applicant shall have first presented to such Board the certificate of the State Board of Preliminary Examination as prescribed by Section 2 of this Act, and any applicant who shall undertake to stand such examination before the above named Boards without having this certificate so issued to him or her prior to such examination shall be guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than fifty dollars, nor more than five hundred dollars for such offense, and the license of the above named Boards for professional examination shall be null and void if issued to any person who has not, before taking such examination, submitted himself or herself to the State Board of Preliminary Examination and received the certificate of such Board as is by this Act provided.

Sec. 4. Be it further enacted, That any person who desires hereafter to practice medicine, surgery, osteopathy, or any other form of the healing art in Tennessee, and who shall attempt to obtain the required certificate of the State Board of Preliminary Examination by fraud, artifice or any other unlawful or improper practice, shall not be given a certificate by such Board until the lapse of five (5) years from the date of such attempted unlawful and improper practice.

Sec. 5. Be it further enacted, That all laws or parts of laws in conflict with the provisions of this Act be, and the same are hereby repealed.

Sec. 6. Be it further enacted, That this Act take effect from and after its passage, the public welfare requiring it.

Passed March 30, 1915.

Approved April 1, 1915.

TOM C. RYE,
Governor.

IN MEMORIAM

W. G. COMPTON

J. B. F. DICE

H. K. EDGERTON

PAUL F. EVE

R. B. NELSON

W. C. RANSOM

W. B. ROGERS

G. B. THORNTON

L. B. WALTON

J. F. WILSON

1914-1915

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Devoted to the Interests of the Medical Profession of Tennessee

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JUNE, 1915

EDITORIALS

KNOWN AND NOT KNOWN ABOUT OUR COUNTY SOCIETIES.

A great deal of the information which is supposed to be on record in the office of the Secretary of the Tennessee State Medical Association is not there, never has been there, and never will be there unless some of the members and some of the officers of some of our county societies make most decided improvement as correspondents. We have decided, inasmuch as these county societies will not give us any very great amount of information, that we will tell them a part of what we know and show them what we don't know about them. We will begin at the top of the list with Anderson, hoping that when we get to Wilson considerable information will have leaked in from this latter named quarter. Any little side comment that may be injected in this report to the county societies about themselves will be made in good spirit and in good faith. If, from the information we have, we think a society is a good one, we will call it good. On the same basis, if we think one is poor, we'll suggest in a very mild way that it might be improved upon. If any misstatement is made we will gladly correct it, but will not be sorry we were wrong if it results in getting facts we should have in hand.

Here goes!

Anderson County: Members reported for 1915, 12; 1914, 9. Registered at Nashville meeting, 0. Distance from Nashville, 196 miles. Reports to Journal of regular meetings, none. Meetings held monthly at Clinton, (?). Average attendance, don't know. Yearly program, don't know. Number of physicians in county, 15. Members from adjacent unorganized counties, none. Members

paid medical defense assessment, don't know. Educational work, none reported.

President, J. H. Gammon; Secretary, J. T. Hayes. Made a good gain in membership over 1914. Maybe the best society in the state. We can't tell. It is nearly time for Dr. Hayes' semi-annual letter.

Bedford County: Members reported for 1915, 18; 1914, 20. Registered at Nashville meeting, 8. Distance from Nashville, 55 miles. Reports to Journal of regular meetings, sometimes. Meetings held monthly at various places. Average attendance, we don't know. Yearly program, no. Number of physicians in county, 31. Members from adjacent unorganized counties, none. Members paid medical defense assessment, don't know. Educational work, well done. President, W. T. Robinson; Secretary, F. B. Reagor. Has apparently lost two 1914 members—certainly has not gained any. A good society, which has been worth a great deal to its own members, to the community and to the State Association. Can and will do better. Dr. Reagor's fountain pen runs dry occasionally, but we think he "tanked up" at the Nashville meeting.

Blount County: Members reported for 1915, 2; 1914, 8. Registered at Nashville meeting, 0. (One 1914 member was at Nashville). Miles from Nashville, 234. Reports to Journal of regular meetings, 0. Meetings held, 0. Number of physicians in county, 20. Members paid medical defense, don't know. Educational work, none. President, none that we know of. Secretary, J. A. McCulloch.

This is a very fine society, because the two men in it are fine men—J. A. McCulloch and B. E. Delozier. A member of the State Board of Health was a member of this society in 1914. Dr. McCulloch wrote the State Secretary on February 6th: "Some of the members say that they are not going to keep their dues paid when the society is doing so poorly. However, I am very anxious to keep in good standing myself and will do what I can to keep the other fellows up. I am enclosing a list of our 1914 membership, and if you care to do so you might write them, making such suggestions as you may think proper." We immediately wrote to all of them and suggested that they keep their society alive. If any replies to our let-

ters were ever started this way, they have been seriously delayed. We get a new suggestion in the reason given Dr. McCulloch by the ex-members as to why they will not pay 1915 dues, but, having seen how the thing works out in Blount county, beseech our members in other counties not to try it.

Blount county has enough doctors, and good doctors, too, to maintain a good society. A good society will do more for them than anything we know of.

(To Be Continued.)

SOME ENTRIES BY THE RECORDING ANGEL.

If the Recording Angel takes any full notes on the words and actions of doctors at the meetings of medical societies, he must keep a section for this particular purpose with an extra force of bookkeepers. If he is not taking notes he is most certainly overlooking a wonderful opportunity for barring the pearly gates against a large and enthusiastic throng of prevaricators who will knock for entrance when that final great day shall come.

For instance: "Mr. President and Gentlemen, I have enjoyed Dr. X's paper immensely"—this in spite of the fact that the speaker has not heard three words Dr. X has read and in spite of the further fact that he would think Dr. X's paper "rotten" had he listened to it.

And again: "Mr. President and Gentlemen of the Society, I have greatly enjoyed the very splendid paper presented by Dr. Q. He has so thoroughly covered the subject in its every aspect that I cannot think of anything that could be said in addition to what has already been said by him"—this in spite of the fact that Dr. Q's paper had bored him stiff, that he had listened carefully to hear even one pertinent point made and knew that the only accomplishment of the essayist had been the using up of time.

And this one: "Mr. President, I think this society is to be congratulated upon having among its members a man who has the ability to write such a magnificent address as we have just had the pleasure of hearing from Dr. Z, which shows such wonderful research, such remarkable familiarity with the world's literature, such exceedingly ripe judgment," etc.,

etc.—this in spite of the fact that the speaker knows full well that Dr. Z got every word of his paper from one text-book and one medical journal, that he doesn't know the meaning of research, and that his "judgment" is really entirely wanting.

And then this other one: "Mr. President, the subject discussed by the gentleman is one that has rather ceased to attract the attention of men who are really doing things. I have listened to the paper with some interest, but am very greatly surprised that the essayist failed to touch upon so many things that might have been discussed with profit, perhaps, and that he has advocated the procedure which has been practically discarded"—this in spite of the fact that the paper was an up-to-the-minute presentation of a live subject in a scientific manner, and because of the fact that the essayist and the speaker are nip-and-tuck rivals for surgical supremacy in a common field.

And this old one: "Gentlemen, there is, there can be but one treatment for appendicitis, and that treatment is operation as soon as the diagnosis is made. If you are in doubt about the diagnosis, call surgical consultation at once. Don't wait, don't delay. And whatever else you may do, don't, for God's sake, don't give morphine"—all in spite of the fact that he never referred a case in his life until the patient was moribund or until an abscess with a quart of pus and a thicket of adhesions had formed, and that morphine was used as soon as he was sure the patient was really hurting.

And one more: "Gentlemen, I beseech you, I implore you to refer these cases early. Don't temporize, don't wait until a tumor develops, don't delay until hemorrhage occurs, don't put them off until glands are enlarged, don't, please don't give morphine, don't, don't, don't"—in spite of the fact that when cases are referred to him he looks 'em over, says, "We'll just wait a day or a few days," gives 'em 1/2 grain, and hustles back to the office to see some other "live ones."

And this very recent one: "My dear professional friends, the case of this Kingston nigger is the worst case of quackery in all the history of quackery in Tennessee. Our brethren of the Roane County Medical Society are en-

titled to our support in this matter. They have been put to great expense in this thing, and they are bearing the burden for our protection and for the protection of our people. I believe every man in this Association will gladly give at least five dollars to help out the doctors of Roane County in their worthy effort to protect our people from ignorant quacks. I, for one, will give five dollars or twenty-five if called upon"—and when his check came to the Secretary, if the letter of the Secretary was answered at all, it was for one poor, measly, piffling, single "bone."

Yes, the Recording Angel can write down many things if he is onto his job in earnest.

BAKING POWDER.

We have a new advertisement in this month's Journal, the advertisement of a baking powder. This, as is the case with all our advertisements, was accepted after we were convinced that it should be accepted. In looking up the subject of baking powders, we have found out a few things. One is that a little aluminum in a baking powder don't hurt anybody who eats the bread in which it is used. Another is that some baking powder manufacturers who want to control the market absolutely try to make it appear that a little aluminum is positively ruinous. Again, we have learned that it is possible for nearly any baking powder to have a tendency toward undesirable effects, but that little is to be feared from any which do not contain an excess of any of the several salts which are used in baking powders. A further discovery made by us is to the effect that in buying some so-called "standard" baking powders, put out by great big corporations which have an ardent desire to possess themselves of the entire trade, you pay a nice little unnecessary and unwarranted excess for the name on the can. We commend the baking powder which is advertised in this Journal to our readers after having taken some trouble to discover the truth about baking powders and after using it in our own kitchen. Also, we commend to you all products advertised in this Journal. We believe they are all dependable goods of reliable business con-

cerns. Otherwise, they would not find places in our columns.

THE SECTION OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.

Officers of the newly created Section of Ophthalmology and Oto-Laryngology were chosen by the members during the recent meeting of the State Association.

Dr. G. C. Savage was made Chairman, Dr. N. C. Steele, Vice-Chairman, and Dr. O. Dulaney, Secretary.

It is purposed to have an annual meeting of the Section on the day immediately preceding the convening of the general session for the reading of technical papers and for transacting such business as may be properly considered by the Section. There can be no doubt that the members will profit greatly by the organization of this section, in which they may give their attention to such subjects as only specialists are interested in. The Journal believes that our "eye, ear, nose and throat men", have done well to organize the new section. The State Association has no more loyal working members than these same men.

MUST SEEK NEW FIELDS.

The following extract from an editorial in the Journal of the American Medical Association is a very different sort of advertisement from that which Tennessee has heretofore had in the columns of the medical press.

"The fact that Tennessee, after repeated attempts, has succeeded in obtaining a new medical practice act is of particular importance to medical education and medical licensure, not only in Tennessee but also in the South and in the country as a whole. With the securing of this legislation, every one of the Southern states has provided for standards of preliminary education for those who are to practice medicine, and all Southern states now require that every candidate for the license to practice medicine must have graduated from a reputable medical college. In fact, this legislation closes what was perhaps the most wide-open door in the country whereby incompetent and untrained doctors could enter the medical profession. No longer, however, may the hordes

of graduates of inferior colleges and—worse still—the hordes of those who did not graduate anywhere, flock to Tennessee! Hereafter, they are barred from the entire South, and for easy entry to the profession they must look elsewhere.”

The passage of our new practice act has aroused wide-spread interest and called forth much favorable comment. The new law appears in this Journal.

THE LAW FOR PREVENTION OF BLINDNESS.

Below will be found the essential sections of a law recently enacted in Tennessee. It is to be hoped that it will have some effect in reminding the careless and compelling the wilful and incompetent who may be called upon to do obstetrical work.

Dr. R. Q. Lillard, Secretary of the State Board of Health, has prepared instructions as provided by the law and will make wide distribution of a leaflet in which the law and instructions are printed.

Section 1. It shall be the duty of the State Board of Health to officially name and approve a prophylaxis to be used in treating the eyes of newly-born infants, and it shall be the duty of the Board of Health to publish instructions for using the same.

Sec. 2. It shall be the duty of any physician, nurse, or midwife, who shall assist and be in charge at the birth of any infant, or have care of the same after birth, to treat the eyes of the infant with a prophylaxis approved by the State Board of Health; and such treatment shall be given as soon as practicable after birth of the infant and always within one hour; and if any redness, swelling, or inflammation, or gathering of pus shall appear in the eyes of such infant or upon the lids or about the eyes within two weeks after birth, then any nurse, midwife, or other person having care of the infant shall report the same to the local Health Officer or some competent practicing physician within six hours of its discovery.

Sec. 3. Any failure to comply with the provisions of Section 2 of this act shall be punishable by a fine of not less than \$5.00 or more than \$100.00, or imprisonment in the county jail not to exceed six months, or both such fine and imprisonment, in the discretion of the court.

LICENSE MUST BE RENEWED.

The license issued to you under the Federal Anti-Narcotic law will become invalid on July

1. You should send \$1.00—right now—to the Collector of Internal Revenue for a license for the year beginning July 1, 1915. This is one of the things you should not put off. The sooner you apply, the sooner you will be served with a new license. There are thousands of them to be issued. It may be that by the time this new license expires the executive officers whose duty it is to administer the Harrison law will have an understanding of its purposes and provisions that will enable them to give intelligent rulings and cut out the silly ones.

MEDICAL DEFENSE COMMITTEE.

S. R. Miller, Knoxville.

H. M. Tigert, Nashville.

Jere L. Crook, Jackson.

The committee reported at the Nashville meeting, on April 13th, that 604 members had paid the assessment fee for medical defense. Two weeks later, April 27th, the number had grown to 637.

Many other members need this protection, and are doing themselves an injustice in their failure to pay their assessment fee. Some of these unprotected members will probably be a victim of a malpractice suit ere the close of the year 1916, which is the limit allowed by the law for bringing suit for alleged deeds committed in 1915. Assuming that you do not need the protection yourself, you should be glad to contribute the small assessment fee of one dollar to help those who need it. However, you may be the first member sued. Few people, except the old and feeble, expect death to come to them, but every day and hour records many unexpected deaths.

The Medical Defense Department of the State Association is going to do a great deal to unify the regular profession. It is going to reveal whose influence, whether by deed, word, or innuendo, caused a suit to be brought. A noted lawyer has said: “The doctors may differ in consultation and wrangle among themselves, but when you sue one for malpractice they stand together, shoulder to shoulder, whether enemies or friends.” Another ex-judge has said: “To sue a doctor for malpractice is like throwing a rock into a bumble bee’s nest; you may hit one or none,

but you can be assured that you will have the whole bunch to fight.”

If you have not paid your assessment fee, doctor, you are not contributing your part to the organized profession, and will not deserve help when trouble comes. M.

FREE PROTECTIVE TREATMENT FOR RABIES.

Dr. R. Q. Lillard, Secretary of the State Board of Health, requests the Journal to state for the information of physicians that the Board will be glad to secure, free of cost, the serum for the protective treatment against hydrophobia for any citizen of the state. This is made possible through the service of the Hygienic Laboratory under direction of the U. S. Public Health Service. The Journal takes great pleasure in presenting this announcement and in commending Dr. Lillard, as Secretary of the Board of Health, for perfecting the plan through which this very valuable service may be offered to all who may need it.

Heretofore it has been only at burdensome expense that persons who have been endangered by injury from rabid animals could secure the needed prophylactic treatment. The U. S. P. H. Service does well to make and distribute the serum, and our own State Board of Health does well to secure it for our needs.

The Journal is informed that Dr. Lillard is trying to develop ways and means that will enable the Board of Health to widely extend the distribution of other protective agents. In this way our department of health can accomplish a great deal for reducing communicable disease and will make the department a much greater power for good in the state.

LEPROSY IN TENNESSEE.

A well marked case of leprosy was recently discovered in Dickson county in the practice of Dr. J. C. Guerin, who, having suspected the true nature of the case, brought it to the attention of the State Board of Health. Senior Surgeon J. H. White, U. S. P. H. Service, was notified, and accompanied a representative of the Board to Dickson county to investigate Dr. Guerin's report. The leper,

for he was undoubtedly leprous, was a man who can contracted the disease in Louisiana and had come to Tennessee knowing the nature of his trouble. While the State Board of Health was making plans for returning him to Louisiana, he decided that he would go of his own motion and is now, we are informed, at the colony for lepers in that state.

While leprosy is not looked upon with such fearful forebodings as formerly, still no community is yet ready to harbor a leper. It speaks well for the Dickson county physician that he suspected leprosy in this case and that he reported it at once to the proper authorities. It speaks well for our State Board of Health and for the U. S. P. H. Service that the report was so promptly investigated. It speaks well for Louisiana that she has a place provided for her lepers whom no other state wants. So in this case everybody is satisfied and sorry for the victim of the dreaded and dreadful disease.

Public Health Department

Dr. W. E. Hibbett, City Health Officer of Nashville, is conducting an active anti-typhoid campaign in an effort to reduce typhoid incidence in the capital city.

The Davidson County Isolation Hospital, under the direction of Dr. B. G. Tucker, County Health Officer, is making a fine record in the successful handling of pellagra. Dr. Jos. Goldberger, U. S. P. H. Service, probably the foremost American authority on this particular disease, recently visited the Davidson County Hospital and highly commended the work of the institution.

Don't forget that the law of Tennessee requires that eyes of new-born children shall have dropped into them some silver salt solution. Conscientious and competent obstetricians do not need the impelling force of the law, of course, but we just drop this reminder for the benefit of the occasional careless man.

The following reports of microscopic examinations for the diagnosis of hookworm disease

have been made to the State Board of Health by the workers now in West Tennessee counties: Carroll county (survey), 213 examined (school age), 74 positive for hookworm; Benton county (survey), 203 examined (school age), 54 positive for hookworm; Hardeman county, 620 examined (all ages), 61 positive for hookworm, 28 ascaris, 1 oxyuris, 7 taenia nana; Hardin county, 1,151 examined (all ages), 103 positive for hookworm, 44 ascaris, 6 whipworm, 1 pin worm, 35 dwarf tape worm; Henderson county (all ages), 2,075 examined, 524 positive for hookworm, 121 ascaris, 5 whip worm, 12 dwarf tape; Henry county (all ages), 913 examined, 196 positive for hookworm, 170 ascaris, 22 whip worm, 17 dwarf tape; McNairy county (all ages), 747 examined, 162 positive for hookworm, 28 ascaris, 1 whip worm, 1 oxyuris, 17 dwarf tape. In 5,922 persons, 1,487 were found infested with some parasite—more than 25 per cent.

News Notes and Comment

The Medical Pickwick, "a literary magazine for and by physicians," is published at Saranac Lake, New York. There's sense in it, there's fun in it, there's fire in it, and there's lots in it that's good. There are also some "ads" in it which don't help it much.

Christian Science failed in New York in the effort to have its "readers" and raiders exempted from the provisions of the law requiring examination and license for all who treat disease. The day will come when all legislatures will follow the lead of the New York lawmakers and put a quietus on all such bosh as "absent treatment" and the rest of the C. S. fakery.

You have just time enough left to buy yourself a couple of "palm beaches," put a set or two of "B. V. D.'s" and a few other supposed-to-be necessities in your old suit case and get to San Francisco to the A. M. A. Loosen up a little, get out of your old rut, see a part of the world you are living in, get a new viewpoint. It'll do you good and help your community.

The American Proctologic Society will meet in annual session at the Civic Auditorium in San Francisco, June 21 and 22. A program to which the best proctologists of the United States are contributors will be offered.

The House of Delegates instructed the Secretary to solicit contributions from members to help out the Roane County Medical Society.

The Secretary did, sending a letter to every member.

To date 40 members have responded, the total contributions amounting to the magnificent and munificent sum of \$114.93, most of which came from four or five men.

We wonder what has become of all those fellows who were just roaring for the privilege of contributing from ten to a hundred dollars. They have not communicated with us.

We also wonder what sort of a bug impels a fellow to declare in a red hot speech that he will gladly give five dollars, twenty-five dollars, or whatever is needed, and then send in a check for one measly dollar.

If the usual brand of consistency is a jewel, what shall we call the usual brand of enthusiasm?

The Harrison anti-narcotic law is receiving a terrific lambasting from doctors all over the land. It is getting some criticism of hostile nature that, in a way, is justifiable. It is also getting many vicious jabs that are just jabs, with no really good reason behind them. Many of these come from men who oppose anything and everything that imposes upon them as much effort as is expended in batting an eyelid, even though intended for the public good. Of course, the Harrison law is not perfect but it's purpose is good. Of course, some of the rulings are a little irksome, but these will be modified and corrected in time. The law is new and deals with matters that are difficult to handle but which must be handled. Let us be patient and do our part—if necessary, a little more than our part—to solve the prob-

lems of the use and abuse of habit-forming drugs.

The "Indian Doctor" not only robs "suckers," but beats his wife, if newspaper reports from Kingston are to be depended upon. As a result of his pugilistic exercise upon the person of his better half, the distinguished "I. D." has been sued for divorce and the popular ear of Roane county and surrounding territory has had poured into it some statement that has caused many of those who signed a certain petition to the legislature—setting forth the rectitude, pulchritude, and other tudes of the aboriginal Ethiopian—to wonder why they did it. The "I. D.'s" wife has attached all his wealth and has haled "I. D." into court—on the advice, we are told, of some of the very lawyers who have been so valiantly defending the doc. These lawyers can't lose—at least they don't intend to.

"Tact, after all, is either a social anaesthetic or a lie with a college education."—Da Costa.

Dr. T. O. Burger, formerly of McMinnville, now of San Diego, California, sends his check for subscription to the Journal, and also sends good wishes to his many friends in the Association. Dr. Burger has recently received appointment to the staff of the County and City Hospital of San Diego, taking gynecology and abdominal surgery. He is much pleased with California.

Dr. J. A. Witherspoon will deliver an address at San Francisco during the meeting of the A. M. A. This will be a part of a new feature of the annual program, which will consist of several public addresses by men of nation-wide prominence on preventable diseases. Dr. Witherspoon will speak on "Hookworm Disease."

Dr. W. G. Snoddy died at Newport on May 27. The Journal received this information too late to secure any particulars.

Dr. R. M. Kirby-Smith, Sewanee, who has been in charge of one of the field hospitals in

the European war zone for some months, will return to his home in June. Dr. Kirby-Smith has done splendid work in combatting typhus fever in Serbia and has been very highly honored.

Rulings on the Harrison Anti-Narcotic law come so fast that we can't keep up with them. Some of them are passing strange.

A letter to the Journal from Dr. E. M. Holmes tells of his continued improvement in health. Dr. Holmes is at the Presbyterian Hospital in Chicago. He expects to be at home in another month.

The Memphis Commercial Appeal, always alive to the importance of health conservation, is putting in some goodicks for malaria prevention.

Dr. Frank H. Bassett, formerly of Nashville, is now located at Austwell, Texas.

Dr. R. H. von Ezdorf, U. S. P. H. Service, was recently in Nashville conferring with officers of the State Board of Health in regard to a malaria survey in West Tennessee.

If some County Secretaries knew what some of the members in their Societies have written us they would, we think, report all those who have paid 1915 dues. If some of them don't report pretty soon we are going to publish a few of those letters from members who say they have paid.

Do you know any news about things medical? Do you think anything needs "touching up?" Do you want to help the Journal? We will be glad to get the news items and we will publish your letter, if it deserves publication, in the "Correspondence Column."

There are now 1,305 paid members in the State Association. This is 139 less than the total enrollment in 1914, but larger than in June in any year before 1915. There should be 2,000 members.

"Doc" has been heard from again. He has

decided that there is nothing left for him but to run for the legislature. His ticket will be non-partisan—purely personal.

Dr. Ira H. Jordan, of Obion, is in Indianapolis for a stay of several months.

The Union City "Chiropractor" got a fine and the court costs plastered on to him for practicing medicine without license. Weakley County is going after the quacks, too.

Society Proceedings

UPPER CUMBERLAND MEDICAL SOCIETY.

The recent meeting of the Upper Cumberland Society at Cookeville was well attended by the physicians of that section which this Society is intended to serve. Some splendid scientific papers were read and the discussion was spirited and profitable. The next meeting of the Society will be at Monterey.

Dr. Z. L. Shipley, Cookeville, was made President; Dr. E. W. Mabrey, Gainesboro, Secretary, and Dr. R. E. L. Smith, Doyle, Treasurer.

WEST TENNESSEE MEDICAL AND SURGICAL ASSOCIATION.

The twenty-fifth annual meeting of the West Tennessee Medical Association was held at Dyersburg, May 19, 20. One hundred and fifteen members registered as present. Eighteen new members were added to the Association. The scientific work of the Association was equal to any former meeting, and the general interest was about as usual.

The physicians of Dyer County entertained the Association with great hospitality and the occasion was an enjoyable one from all standpoints.

The following officers were elected:

President, Dr. M. A. Blanton, Union City; Vice-Presidents, Dr. T. N. Cochran, Trenton, and Dr. G. A. Brandon, Lexington; Secretary-Treasurer, Dr. I. A. McSwain, Paris, for twenty-five years Secretary of this body. Dr. Geo. McSwain was appointed Assistant Secretary.

The next meeting will be held at Jackson, Tenn.

It may be said of this Association that it has no superior as a District Medical Society in the country.

JEFFERSON COUNTY.

The Jefferson County Medical Society met in Dr. B. M. Tittsworth's office at Jefferson City, at 10 a. m., June 1, 1915. The President being absent, the society was called to order by Dr. B. F. Brown. Minutes of the previous meeting were read and approved. When clinical cases were called for, Dr. Roberts reported a case of uterine polypus, as large as a quart cup, complicating pregnancy. Dr. N. M. Dukes reported a case of insanity complicating pregnancy. Dr. Lequire reported a case in which the right side of the chest was abnormally enlarged. Dr. Dukes gave an interesting talk on ulcer of the stomach. Discussed by Drs. King, Lequire, Kinder and Tittsworth.

The resolution introduced by Drs. Brown and Preston to change the time of meeting was laid over until next meeting in September.

Dr. G. M. Kinder made application for membership in our society.

Dr. W. T. King was appointed to read a paper on "Infantile Paralysis" at next meeting.

Drs. Lequire, Anderson and Tinsley were appointed to read papers at the next meeting on subjects of their own choice.

Society adjourned to meet at Dandridge, September 7, 1915.

B. M. TITTSWORTH, Secretary.

ROANE COUNTY.

The Roane County Medical Society met in the parlors of Cumberland Hotel, Harriman, Monday, May 17. Dr. H. M. Carr presided.

Those present were: Drs. Nelson, Sewell, J. M. Clack, E. S. Phillips, Tom Phillips, Rockwood; Drs. Roberts and Zirkle, Kingston; Drs. Carr, Givan, Dodson and Hill, Harriman; Dr. Waller, Oliver Springs.

Two interesting clinics were presented to the society and several cases were reported. These

were discussed thoroughly by most all present. Dr. J. J. Waller delivered an address on "The Reciprocal Relation of the Public and Medical Profession," which was full of good and timely points. Dr. J. P. Hatfield was elected a member of our society.

Society adjourned to meet in Rockwood the third Monday in June.

W. W. HILL, Secretary.

M'NAIRY COUNTY.

The McNairy County Medical Society met at Selmer Thursday, May 20, 1915, in the office of Drs. Smith & Smith with a good attendance. The President being absent, the Vice-President, Dr. Bell, presided. After the approval of the minutes of last meeting and the transaction of some routine business, the application for membership in the society of Dr. J. A. Eason of Leapwood and Dr. O. C. Doty of Savannah were received, both being elected by acclamation.

Dr. E. M. Smith read an interesting paper on "Mal-Positions of the Uterus," which was freely discussed by members present.

The Secretary read a communication from the Secretary of the State Society relative to the Roane County faker. After some discussion, every member present contributed 25 cents each as a donation to assist the Roane County in prosecuting said faker.

The society adjourned to meet third Thursday in June.

T. G. JACKSON, M.D.,
Secretary and Treasurer.

EAST TENNESSEE MEDICAL ASSOCIATION.

The Athens meeting of the East Tennessee Medical Association, held May 20 and 21, was a splendid success in every way. The registration was 97. The entire time was taken up with reading and discussion of scientific papers. The following officers were elected for the ensuing six months: President, Dr. T. M. Roberts of Sweetwater; Vice-Presidents, Drs. M. A. Blanton of Baileyton and T. N. Eblen of Tyner; Secretary-Treasurer, Dr. H. P. Larimore (re-elected).

The next meeting will be at Morristown on

October 14 and 15, 1915. There will be no special program arranged for the May, 1916, meeting, but, instead, the meeting will be held in conjunction with the State Society at Knoxville in April, 1916.

H. P. LARIMORE, Secy.-Treas.

MIDDLE TENNESSEE MEDICAL ASSOCIATION.

The 42nd semiannual meeting of the Middle Tennessee Medical Association at Lebanon, May 20 and 21, is said to have been the most successful, from every standpoint, for a long time. Timely papers were read and lively discussions were had. Officers for the ensuing term were chosen as follows: Dr. F. B. Reagor, Shelbyville, President; Dr. R. W. Billington, Nashville, Vice President; Dr. Jack Witherspoon, Nashville, Secretary-Treasurer. The next meeting will be at Springfield.

HENDERSON COUNTY.

The Henderson County Medical Society was called to order Tuesday, May 10th, by President J. T. Keeton. On account of the weather there was a very small attendance. There being no essayist present, the time was spent in reporting and discussing cases.

It was decided to have the annual outing of the Henderson County Medical Society on June 10th. The following Committee on Arrangements was appointed: Dr. S. T. Parker, Chairman; Dr. W. T. Watson, Dr. G. A. Brandon. The committee was clothed with all the authority necessary for the selection of place, guests, etc.

The Henderson County Medical Society has not missed a meeting in three years, and the society continues to grow.

Doctors present were: Drs. J. T. Keaton, J. C. Stinson, C. E. Bolen, Watson, Johnston, Huntsman and Parker.

After adjournment the society attended the Culpepper meeting in a body and the evangelist gave us a very interesting talk, commending the great work that the medical profession is doing for the prolongation of human life and the alleviation of suffering humanity.

SAMUEL T. PARKER, Secretary.

Book Reviews

INFECTION, IMMUNITY AND SPECIFIC THERAPY, WITH SPECIAL REFERENCE TO IMMUNOLOGIC TECHNIC. By John A. Kolmer, M.D., Dr. P. H., Instructor of Experimental Pathology, University of Pennsylvania; Professor of Pathology and Bacteriology, Philadelphia Polyclinic, and Pathologist to the Department of Dermatologic Research; Pathologist to the Philadelphia Hospital for Contagious Diseases. With an introduction by Allen J. Smith, M.D., Sc.D., LL.D., Professor of Pathology, University of Pennsylvania. With 143 original illustrations, 43 in colors by Irwin F. Faber, Instructor in Medical Drawing, University of Pennsylvania. Philadelphia and London. W. B. Saunders Company, 1915.

This volume is divided into five parts.

Part 1, in five chapters, discusses general immunologic technic. Directions for the care of centrifuges; the making of pipets, capsules, test tubes and other apparatus, together with their proper preparation for use, are clearly given. The various methods of obtaining human and animal blood; their preservation; separation of cells from serum, are next detailed. This is logically followed by accurate directions for the various methods of inoculating animals and effective active immunization.

Part 2. This section consists of two chapters on "Principles of Infection" and "Production of Disease." These two chapters are very interesting and constitute a key to the entire volume.

Part 3. Under the head of "Principles of Immunity" and "Special Immunologic Technic" the author takes up in order the theories and varieties of immunity; the role that the various tissue cells and fluids of the body play in production and maintenance of immunity. The meaning and origin of the various terms used in bacteriologic and immunologic parlance, such as opsonins, phagocytosis, opsonic index, antitoxins, ferments and anti-ferments, agglutinins, precipitins, cytolytins, bacteriolysins, hemolysins, complement and complement fixation, sytotoxin, anaphylaxis, etc., are elaborately set forth. The entire subject of complement fixation is treated in a truly masterly style. Under this head the Wassermann test, with many of its modifications, is clearly discussed. The relative value of the different methods of performing this test in the experience of many authorities as well as in the author's own, are given in many statistical tables. Complement fixation in glanders, gonorrhea, typhoid tuberculosis, and other diseases are also presented in an equally elaborate manner.

Part 4. The practical part of the book to general practitioners is included in this section under the following captions: Anaphylaxis, Active Immunization, Vaccines in the Prophylaxis and Treatment of Disease, Passive Immunization, Serum Therapy, Vaccine Therapy, Chemotherapy, the various Tu-

berculin reactions, how and when to use each in order to get the best results, the luetin reaction, the mallein reaction and other allergic reactions are considered in like manner in this section.

Part 5 consists of a series of laboratory tests designed especially for the use of students. The entire subject of experimental infection and immunity is covered. The directions for each test are given and a number of questions are asked in reference to the results obtained in order to impress the salient features of the experiment on the student's mind.

This volume should and will find a ready welcome in laboratories for its intrinsic value. Directions for the preparation of the various reagents as well as for every step to be performed in all of the reactions are so clearly and comprehensively given that even the average student, with the proper amount of preliminary instruction under competent instructors, should have no difficulty in following them.

To the general practitioner many features of the volume will appeal through their practical nature. Among these might be mentioned the sections on vaccine, serum and chemotherapy, the numerous invaluable suggestions to be found in the section on allergic reactions and the interpretation to be placed upon the results obtained in the various diagnostic reactions.

To students in general this volume offers a great saving of time, as it includes nearly all the important findings of the thousands of research workers throughout the world in this special field of medicine.

DISEASES OF THE DIGESTIVE ORGANS, With Special Reference to Their Diagnosis and Treatment. By Charles D. Aaron, M.D., Professor of Gastroenterology in Detroit College of Medicine and Surgery. Octv. 790 pages, 210 illustrations. Lea & Febiger, Philadelphia, 1915. Cloth, \$6.00.

In his preface to this very complete and trustworthy volume the author remarks upon the "unfortunate tendency nowadays to isolate the consideration of diseases of the digestive organs from the great body of internal medicine" and asserts his endeavor "to reaffirm the intimate relationship between gastro-enterology and all branches of internal medicine." His purpose in this respect is evident throughout his book, for the text is so constructed and statement so set out as to make the work helpful to the everyday doctor. The physiology of digestion is discussed in the light of most modern knowledge, methods of examination, significance of findings, technique of treatment, and detailed discussion of the various diseases of digestive organs are presented in a most readable and helpful way. Recent progress in all studies bearing on the organs of digestion receives thorough consideration, but much of the theory that gets nowhere is eliminated.

In spite of careful editing, mistakes and contradictions will creep into even the best books. On page 705, Dr. Aaron warns his readers never to give castor oil with thymol and states the reason for his warning. Yet, on page 708, he recommends a prescription containing thirty grains of thymol and one ounce of castor oil!

One who holds the modern, proved-correct idea of the treatment of appendicitis, acute or chronic, can but wonder at the amount of space and the abundance of words devoted to the treatment of appendicitis. Even phylacogens come in for favorable mention!

Except for the multitude of medicines considered and advised, your reviewer believes this to be a thoroughly good volume.

PYEOLOGRAPHY—A STUDY OF THE NORMAL AND PATHOLOGIC ANATOMY OF THE RENAL PELVIS AND URETER. By William F. Braasch, M.D., Mayo Clinic, Rochester, Minn. 323 pages, with 296 pyelograms. W. B. Saunders Company, Philadelphia. 1915. Cloth, \$5.00 net.

Braasch presents nearly three hundred pyelograms selected from the several thousand made at the Mayo Clinic during the past five years and describes and explains them in a most interesting and instructive manner. A relatively large part of the work is devoted to the normal pelvis and ureter, and wisely so. The uninitiated would be inclined to look upon many normal pelves as abnormal or pathologic, were it not for Braasch's illuminating work. The History of Pyelography, Technic, Abnormal Position of Pelvis, Mechanical Dilatation, Inflammatory Dilatation, Renal Stone, Ureteral Stone, Renal Tumor, and Congenital Anomalies are the other headings under which many beautiful plates are grouped and enlightening comment is made. Dr. Braasch clearly and positively demonstrates the value of pyelography as an aid in diagnosis and treatment of pathology of the kidney and its connective canal. The book is beautifully printed.

CLINICS OF JOHN B. MURPHY. Vol. IV, No. II. April, 1915. W. B. Saunders Company, Philadelphia. Paper, \$8.00 per year.

In this volume of Murphy's Clinics is included a "talk" on "Carcinoma of the Breast" by William L. Rodman, which is an important contribution to this volume. It would be a fine thing if every doctor in the land would read this. Chas L. Mix contributes a "diagnostic talk" on "Massive Coagulation of Cerebrospinal Fluid" in which he shows that he has made most exhaustive study of this subject. The case in hand calling forth Dr. Mix's effort was commented upon by Murphy during the operation, which resulted in the removal of a cystic glioma and in complete recovery of the patient.

The rest of this volume is devoted to Mur-

phy's clinical talks on various subjects, among them osteomyelitis, arthritis, epithelioma, and hypertrophy of the prostate.

CANCER—ITS CAUSE AND TREATMENT. By L. Duncan Bulkley, M.D., Senior Physician, New York Skin and Cancer Hospital. Paul B. Hoeber, New York, 1915. Cloth, \$1.50.

This volume is made up of six lectures by Dr. Bulkley, who has some strong convictions concerning the nature of cancer and its prevention and cure. That cancer is not caused by a micro-organism or parasite, is not hereditary, not dependent upon occupation, not by any means altogether a disease of older age, not belonging especially to any sex, race or class, and not dependent upon any single cause, are some of Dr. Bulkley's "nots."

Deranged metabolism, "the only remaining possible etiological element," says Bulkley, "acts by inducing changes in nutrition, which latter depends on diet and the proper action of secretory and excretory organs." One conclusion is that cancer, when fully developed, hastens its own growth and the deadly progress of the disease by a poison which it secretes; another, that cancer is on the increase the world over, and that this increase varies inversely with the decline of consumption; another, that self-indulgence in eating and drinking, especially of meat, coffee and alcoholic beverages, tends to produce cancer. Dr. Bulkley believes that no single remedy will ever be discovered and that "the total achievements of surgery are insignificant." Surgery, nor X-ray, nor radium cannot hope to lessen greatly the morbidity of cancer, he says, but he believes that "the simple life, with the avoidance of the dietetic and other causes * * * provides the best hope for the arrest of the rapidly increasing development of cancer."

MATERIA MEDICA AND THERAPEUTICS FOR NURSES. By Linette A. Parker, R.N., Instructor in Nursing and Health, Teachers' College, Columbia University. Lea and Febiger, Publishers, Philadelphia, 1915. Cloth, \$1.75.

This is one of the volumes of "The Nurses' Text-Book Series," and is a compilation of instructive scientific facts a knowledge of which competent nurses must have. The author has exercised rare judgment in the selection of the material she has offered for instruction of nurses and has presented it in a way that is attractive. Tiresome and unnecessary detail is omitted, helpful and needed statement is included. A nurse who studies this volume will know what to look for after drugs have been given and what she should do if unexpected developments take place. A chapter on "Legislation Concerning Poisonous and Habit-Forming Drugs" is a valuable feature of the book.

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE

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NUMBER 3

SPECIAL CANCER EDITION

CANCER'S PREDATORY WARFARE.

By E. R. Zemp, M.D.,
Knoxville, Tenn.

In the sinking of the Lusitania the whole civilized world was horrified, and especial emphasis was laid on the fact that many women lost their lives. It was horrible, was it not? Yet why should such a minor disaster to humanity cause such a feeling of horror as to chill the very blood of our hearts, when 75,000 people die each year in the United States a much more agonizing death than drowning, and we, in the medical profession, look on with complacency and heartless indecency? The submarine warfare that cancer is carrying on among the neutrals of our beloved land is overwhelmingly worse in every particular and more diabolical than that which any nation could ever put into execution against another. And while we raise our hands in holy disapproval when a ship is sent to the bottom, we actually aid in the slaughter of innocents by our indifference, ignorance, or villainous avariciousness, in regard to our cancerous patients. The mortality from cancer is not only woeful, it is disgraceful, for it is in a large measure preventable. It is stated on good authority that if doctors did their duty the mortality could be cut down fifty per cent. Think of it! What a stigma rests upon us when 37,500 deaths occur each year because we fail to do our duty.

Some writers declare that the death rate

from cancer is increasing, and the public may think the condition hopeless, for they have gotten their information largely through advertisements of patent medicines, cancer sharks, and through you, my dear doctor. What have you told them about cancer? Did you say, "Very little is known about it, but one thing is known, and that is, it is incurable"? Did you say that? If so, for the sake of humanity close up your office and quit. I will admit that in a way we have not reaped a very abundant harvest from the enormous amount of investigation that has been carried on along this line. But one thing we do know—cancer is curable, and it should be the joy and pride of every doctor in the land to spread this news as far as truth will travel. It makes no difference how much we differ on the cause of cancer. It makes no difference to the patients whether they have an infection, or a colony of embryonic cells running wild. The point of emphasis with the patient is that a cancer is present and he wants to be separated from it as soon as possible. Right here lies the secret of success. Convince patients that they have cancer and they are generally willing and eager to be cured. Unfortunately the conviction strikes home too late to be of any service in a large number of cases. It has been said that the average patient has cancer one year before consulting a physician and that the physician, for some reason best known to himself, takes another year before calling in a surgeon. Only about 68 per cent of superficial

cancers are operable when brought to the surgeon, and about 48 per cent of deep cancers, although 50 per cent of the inoperable cases had precancerous symptoms. What an indictment! And what answer can we physicians give?

All the blame cannot be put upon our shoulders, but enough of it is there to make us extremely uncomfortable. It is a notable fact that through ignorance or pride, patients will conceal the fact that they have a cancer, or anything that resembles it. Unfortunately for the patient, pain is not always a precancerous symptom; if it were, more patients would apply early for treatment. Pain may be absent until the disease has long passed into the inoperable class. While pride often prevents a patient from applying for relief, it sometimes drives them to the doctor quickly. In cases where the cancer is visible and constitutes a deformity, patients will seek relief from them, for the most indifferent hardly regard them as improving their beauty. It is a great pity that all cancers could not be on parts of the body not covered, and it seems, in women at least, this would give it a large enough field to satisfy its gluttonous nature without attacking the viscera.

Many patients have cancer and never suspect it until too late. They go to their doctor and he laughs at them, dismissing the case and making the diagnosis with a wave of his hand. Upon what meat does this, our Doctor Caesar, feed that makes him so wise that he can differentiate between cancer and other conditions by talking with the patient? Do you know that many cases that apply to the surgeon for operation have never been examined, but have been told that the knot in their breast was cold, or that the vaginal discharge was change of life? Change of life, well, perchance, but a change none of them are very desirous of making, else they would be going to a preacher, not a doctor.

Have you noticed how easy it is now to convince patients that they have appendicitis, and how well they have learned the lesson that the only cure for it is removal of the offending appendix? Was this condition brought about by telling patients they had the bellyache, or indigestion, or congestion, without examining them? When a patient

has a pain in the abdomen now we examine them, for if we do not do it, some other doctor, conscientious and wide-awake, will. The education of the doctor and the patient along this line has saved many lives, and the same thing applies to cancer, only this is by far a more serious condition.

How can the mortality of cancer be reduced? By educating the doctor and the patient. To the uninformed this might seem an easy solution to the question, but the chances are that no one now living will be alive when this happy state of affairs is brought about. God help the man who undertakes to educate the public along any line. It is the most discouraging work in the world, but fortunately there are many brave hearts in the profession and I believe it will come some day. To begin with, the profession must stand solidly behind this proposition, and all deserters should be shot with the scorn of his fellow practitioners. Every patient that applies to us with any precancerous symptom should have a most careful examination, and we should thoroughly acquaint ourselves with these symptoms. All ideas of the vintage of 1492 should be brushed aside in regard to cancer, and regardless of our belief as to its cause and curability, the patient should be given the benefit of the doubt. Cancer is curable, and the cure consists of early removal. Get there first if you can, but if you cannot be first, be an early second. We know that cancer follows irritation, so that we can often prevent it by removing sources of irritation. The constant pressure from clothing, decayed teeth, smoking, lacerated cervixes, gastric ulcers, are but a few of the removable causes. Some one has wisely suggested that patients present themselves to the doctor every six months for examination, just as they go to the dentist. And why not? Thousands of lives would be saved in this way. Can we ever get the public to co-operate with us along this line? The dentists have done it and so can we, but we must show that we are sincere, and when the patients present themselves they should receive a careful examination.

I am not quite sure what is the best way to educate the public, but judging from the widespread interest taken in "Twilight Sleep"

by the public, which was advertised in the magazines, I believe that would be one good way. Perhaps another good way would be to fill the doctors with interest in this subject, so that each one would be a committee on spreading the news. This is a bigger job than educating the public, for so many doctors are perfectly satisfied with their present attitude toward humanity, that it will be hard to wake them up to the urgency of this question. Nurses should be taught that cancer is curable and the precancerous symptoms, and they can do a wonderful amount of educating.

And this is what we want to teach them and ourselves: That cancer at first is a purely local disease and curable; that delay is dangerous; that the only hope lies in the early and complete removal of the offending part. Well, what are we going to do about it? Shall we not as a profession remove this disgrace?

CANCER FROM THE LABORATORY STANDPOINT.

By William Krauss, M.D.,
Memphis.

For the purpose of this symposium, cancer should include all neoplasms capable of forming metastases. Cancers spring from pre-existing cells of the same type and degree of differentiation, and these cells may differ from normal cells only very slightly; the difference is always one of degree. They differ in their behavior to normal cells of other types in the same tissue-complex in the same degree, i.e., in equal ratio with their morphologic aberration and grouping tendencies. For example, a cylindroma, originating in the mucosa of the rectum will reproduce in the liver, forming pictures resembling portions of cross sections of Lieberkuhn's follicles, implanted directly in the very substance of the lobules or groups of lobules, the liver cells in the path of their proliferation having been dissolved by the special enzyme of the cancer. Virchow's term, "*Wucherung*," meaning, overgrowing things like weeds do, is the most descriptive yet proposed. This maintenance

of identity is exemplified also in experimental mouse sarcoma. Even after passage through thousands of mice, the original human sarcoma has bred true to the last, its original morphology remaining unchanged.

Clinical malignancy is also very much in ratio with departures from the normal in morphology, grouping and ability to form metastases. The metastatic potentialities vary with the size, type and outline of the cells. We may have a bone myeloma which so closely resembles sarcoma of a malignant type that one may easily assume that if the cells were only more labile, metastases would invariably result. Undoubtedly the stimulus of proliferation is a factor also. Histologically uterine fibroid is a "near-sarcoma." There is tendency to metaplasia to a type of cell less highly differentiated, and we frequently hear of "sarcomatous degeneration," meaning merely the earlier mitosis and cell multiplication, resulting in cells more easily loosened and disseminated.

This brings up one point to be emphasized before laymen, i.e., that all cancers spring from normal tissues and do not come from sources outside of the body.

From a histo-pathological standpoint cancers are tumors composed of cells, the immediate ancestors of which were normal in character and perhaps only slightly abnormal in function. Physiologically, however, the progenitor of the cancer cell was "sick." Cancers never arise from a perfectly normal base. Usually there has been a prolonged period of reduced resistance. For instance, skin cancers never appear in the young and they occur nearly always on regions not covered by clothing. In the case of chimney sweep's cancer, the clothing has not protected the part from the irritant. All warts, moles, old pimples and skin blemishes of this character are areas of reduced resistance. When such a group of cells are called upon to reproduce themselves they may do so successfully for an indefinite number of generations, but any reproduction may be faulty and the chromosomes inherited by the daughter cells will include more reproductive and less metabolic elements, so that they will devote most of

their energy to reproduction, even without reaching maturity; the area of such cells shows loss of symmetry; some cells are larger, some smaller, all lack exactness of contour, and, consequently, the grouping becomes asymmetric. The more rapid the development the less "anchorage" there is, and thus the tendency to metastasis has been established. Only the ability of their neighbors to restrain them interferes with their going "traveling." Reproductive energy on part of the normal cells is thus stimulated, and the cancer consists of cells from all the tissues in the affected area. So long as this tissue tension thus established holds, no cells get loose; there may be local growth, but there will be no metastases.

This brings us to the second postulate for the laymen: "All cancers are primarily local."

Diagnosis: I believe every physician should acquaint himself with the latest information in regard to the gross or clinical diagnosis of tumors. I should advise everyone able to do so to visit very large clinics and study the following points: (1) The regional possibilities: what to look for in a given region, how early to suspect it, data leading to such suspicion, and the manner of making search for early signs. (2) That random manipulation may be dangerous, as it may dislodge as yet undisseminated elements and that, nevertheless, certain harmless palpatory tests are often definitely diagnostic. (3) The very large percentage of malignancies found under the microscope after removal in trivial blemishes which heretofore he has advised letting alone.

(Postulate for layman, No. 3: No blemish, however small and insignificant looking, if of more than a few weeks' duration, should be regarded as innocent.)

(4) The ability to judge the specimen *in situ* and after removal in the gross, such as color, texture, resistance to and "shriek" under the knife, juice yielded by scraping, etc.

(5) Observe the manner of removal, how to decide what to choose, e.g., from a cervix, how deep to go, how to mark for orientation (N. B.—Many a diagnosis goes wrong because

sections are taken in the wrong plane, because there are no landmarks indicating how the piece should go on the block for section.)

(6) The question of preservative. Tissue never should be, and almost always is, thrown into alcohol which is too strong and insufficient in amount, so that upon arrival in the laboratory it is too hard to cut, outside, and "unfixed" in the interior. For ultimate critical study nothing is better than Zenker's solution, into which the tissue, not too large, should be dropped *at once*. Here, again, one must know what to choose. If in doubt, 5 per cent formalin, about 20 times the bulk of the tissue itself, will preserve and passably fix any size or thickness of material. If nothing but alcohol is handy make it 70 per cent and use plenty of it, not less than 10 volumes per volume of tissue. In that case, however, the tissue must be cut in small pieces. Formalin-hardened tissue can be cut at once with the freezing microtome and thus many valuable hours saved if the complete operation has to wait for the diagnosis. Curettings should not be cut frozen. It is best always to send these in weakened grain alcohol. No tissue should ever be sent without fixation. Sometimes it is received dried up in gauze, putrid in water, mashed between slides, scabs wrapped in paper and by other absurd and impossible methods too numerous to mention, thus defeating, perhaps, the only possible chance at diagnosis. I wish every physician in the land not already posted could sit down, memorize and digest this paragraph 6. It is of tremendous importance. The man with large experience with neoplasms needs but little aid from the microscope. The man who cannot judge a neoplasm as he should is very apt to get it to the pathologist in a condition which defeats any attempt at correct diagnosis.

(7) The pathologist is entitled to a good history. Unless he is present at operation, he has handicaps enough without being left in the dark with respect to data only laziness prevents your supplying him with. He must guess at the directions of his sections, he gambles on your having removed the right tissue, especially in curettage, he takes chances on your preservative, and he has to

decide without knowing where the tissue comes from, that it is or is not normal to the part, age, sex or condition of the person from whom it was removed. He knows nothing about duration or inflammatory complications. If the tissue is typical he has no trouble about making a diagnosis; in such cases, however, the patient himself knows by this time that he has a cancer.

Diagnosis of operation: The hurried study of a badly fixed frozen section should be undertaken only by one who has examined hundreds of specimens by this very method and who has opportunity for doing it as a daily routine. It is worse than worthless if done by one who does such work only occasionally. Such a diagnosis must be supplemented by the rare ability to judge the removed specimen in the gross. Not infrequently this can clear up a histological doubt.

Presumptive diagnostic tests: The most advertised, and at the same time the most unreliable, is the Abderhalden test. It finds most recommendation at the hands of the cut price, advertising laboratory. Abderhalden himself cautions against relying upon it. The principle of the test is that a tissue foreign to a part excites the production of ferments capable of disposing of it, and that such ferments in excess "spill" into the blood plasma. The serum of a suspected patient (in such cases we generally deal with concealed cancer) is put into a dialyzer with—what? To be specific it must be the identical kind of cell that the suspected growth is composed of, unmixed by any supporting tissue. Abderhalden says that although the tissue which excites the production of ferment is or may be highly differentiated, the resulting ferment is not entirely specific. The most we can get out of such a diagnosis is to be able to say that there is ferment in the blood, and there is some experimental proof that even this is open to question. In any case, one should have an unmixed substrate of the specific cancer cells in question, e.g., uterine cancer substrate, cervical cancer substrate, pyloric cancer substrate, etc., and, even here, some difference would exist as to the individual. One might reasonably well depend upon auto-pyloro substrate, for instance, and this would be obtainable only after operation, and

could be accepted as positive only if we can exclude other conditions that might, for the time, flood the plasma with ferments. Freund and Kaminer's test depends upon the very fact that normal serum digests cancer cells, while cancer serum does not.

It is perhaps unprofitable to enumerate the many presumptive tests that have been tried for cancer of the stomach. Very exhaustive work in experimental laboratories has put the fatal "parallel" against them, so that today the only presumptive test is the association of achylia with lactic acid, Oppler-Boas bacillus and occult blood, and this may fail in either direction. Unless the position is pyloric and the chronic ulcer has been transformed completely, both lactic and hydrochloric acid may be present.

Among the serologic tests under discussion we may mention the hemolytic test, the precipitin test, the cytolytic test, complement fixation test, the miostagmin reaction of Ascoli and Izar. Of these, the last named has been received most favorably. Further refinements may place it on the list of practical tests. None of the chemical tests proposed have stood the test of critical trial.

CANCER OF THE BREAST.

By Richard Barr, M.D.,
Nashville, Tenn.

To what extent is our method of treating the subject of tumors of the breast in the lecture room, in text book and in journal articles, responsible for the dilatory tactics of a part of the profession in the matter of advising the proper surgical investigation of these conditions? Surely it has some influence, and in my opinion, so much that I believe it a matter of serious importance in the discussion of this subject to leave out all unessential description. It is important to not only lay stress upon what is definitely known to be of clinical value, but also to avoid all confusing reference to matters which, while of pathological interest, can have no practical value in treatment.

The very small amount of information, that is of clinical value, which we have with

regard to tumors of the breast, can be stated so that the dullest mind can catch its significance, and in such short space that the least studious of our profession would not begrudge the time and attention necessary to master it.

Yet there are whole text books written on tumors of the breast, of which books all that is of practical value outside of the operative technique could be written on a postal card. Such diffuseness simply beclouds the reader and gives him a bad sense of proportion, if indeed it does not discourage him altogether from trying to get a clear cut idea of the essential facts.

Especially to be deplored in the literature of tumors of the breast are the tables of differential diagnosis between the different forms of tumors. If we know anything at all about tumors of the breast, we know that no tumor can be clinically diagnosed benign with sufficient accuracy to justify treating it on that basis. There are clinical evidences of malignancy all right, but they are only of practical value in helping us in determining when cases are too far gone to offer hope through operative interference. Since clinical recognition of benignancy is impossible, why waste space in description of evidence which means nothing more than mere possibility at best?

Breast tumors are so accessible and the physical evidences of disease are so capable of demonstration that the subject has enjoyed the reputation of being a great field for teaching or at least of offering the teacher opportunities for making a grandstand display of his knowledge.

The "professor" takes advantage of this opportunity unless he has rarely developed self-control, and the result is confusion of the student mind on real issues, which results later in deplorable delay while the student, now a doctor, tries to make the clinical diagnosis which is impossible until the period of hope has passed.

From time to time I have been impressed with the effort of conscientious practitioners to equip themselves to make breast diagnoses and have heard them refer to text book or journal articles which to their minds made

the differentiation clear and practical. It is probably true that the writer really did not intend to make such an impression, and yet why should the authorities write out the details for recognizing the different forms of tumors unless they expect students of their work to make the attempt at clinical differentiation for purposes of treatment? The reasonable conclusion to be reached is that it is thought and taught that the differentiation can and should be made. The student cannot realize that the diagnosis is a matter of grandstand interest alone and has little or no practical value.

Why should a professor of surgery spend hours in teaching the evidences upon which malignant or benign growths may be recognized when in all honesty he must wind up with the admission that these evidences cannot be trusted to prove benignancy, and that from 90 to 100 per cent of breast tumors are malignant or will become so? It is even questionable to what extent it is safe to emphasize the positive evidences of malignancy, as most minds throw in the reverse gear at once and figure that the absence of these signs means that the growth is benign.

Why should our work on tumors of the breast at school, in medical societies and in journal writing not be confined to urging the importance of investigation at the earliest possible moment of the slightest evidence of disease of the breast, and why should diagnosis not be limited to mere recognition so far as tumors are concerned without effort at differentiation?

If any class of breast tumors should be differentiated it is those cases of cancer which are too far gone for surgical treatment. All other growths are surgical. All breast conditions of any type which cannot be demonstrated to be purely congestive are surgical. The slightest responsibility a doctor can assume is in advising surgical investigation of a swelling in the breast, and on the other hand, he can assume no more serious responsibility than by advising expectant treatment under similar conditions. Here at least, it is justifiable to cry "wolf" on the slightest suspicion, and both professional and lay opinion should uphold the man who

makes his mistakes, if mistakes they can be called, in exploring and removing the few breast tumefactions that would disappear spontaneously.

Let us simplify our teaching even if by so doing we rob the professor of one of his best talking subjects. Let us confine our text book and journal articles to the essential facts, and put our ignorance of clinical means of diagnosis, the enormous percentage of malignancy, and the tremendous advantage of early operation so definitely before the profession and so unobscured by extraneous matter that no one can misunderstand that here delay is inexcusable and that a lump of any size, shape and consistency, no matter how movable and no matter where located in the breast, should come out. The question of what should come with it can be decided when the lump has been exposed to the eye and the microscope, and is another matter altogether.

CANCER OF THE COLON.

By E. M. Sanders, M.D.
Nashville, Tenn.

Cancer of the colon is not of infrequent occurrence, in fact, it is met with so often that it certainly behooves us to keep the possibility of its existence constantly before us when dealing with partial or complete intestinal obstruction and cases of vague colon disorders. And we must not forget that it attacks the young, the middle aged and the old—men and women alike—and demands prompt and radical surgery when it is found. The pessimism of the medical profession regarding diseases of the gastro-intestinal tract is not justified by the facts. Two hundred and sixteen cancers of the colon were found at the Mayo Clinic out of 1,498 cases of cancer of the gastro-intestinal tract. Forty per cent of these patients, who had radical operations, are alive and well five years after operation. Of 56 cases of carcinoma of the intestines, that went to autopsy in the Virchow Pathologic Institute in Berlin, one-third had no demonstrable metastases. If one-third of them had no metastases at the time of death, how many would have had no metastases a year, one and one-half or

two years before death? We must come to Murphy's advice and make the early diagnosis of cancer and insist on immediate operation—not recommend early operation, but insist on it and compel it. There is no location in the intestinal tract where cancer is so amenable to treatment as the colon, the explanation of which fact is that the colon has a very scanty lymphatic supply. The splenic, hepatic and sigmoid flexures and the cecum have a little more lymphatic supply than the balance of the bowel, therefore, cancers situated at these locations will bear a little higher rate of mortality.

It is generally believed that cancer is on the increase and it is also believed that this increase of malignancy in general is to be found more in cancer of the intestinal tract than in the breast, uterus, about the face and other external parts. I believe that the factor in this increase of cancer in the intestinal tract is the greatly improved methods of diagnosis of the present day. The X-ray has done much to facilitate the diagnosis of cancer of the esophagus, stomach, small and large intestines, and it is particularly valuable in the diagnosis of cancer of the colon because we have the advantage of a two-fold use of the X-ray in our efforts to diagnose cancer of the colon by being able to introduce the shadow producing medium (either below or above the trouble) and, in many instances, the bismuth and barium enema is quite as satisfactory, or more so, than the bismuth taken by the mouth. Another feature, which has made it possible to diagnose practically all of the malignancies of the intestinal tract and particularly those of the large bowel, is that the laity have arrived at such an attitude toward surgery that very few are left who are unwilling to have an exploratory incision when such is advised by their physician, and, as a matter of fact, the diagnosis of cancer of the colon is not difficult and, with our improved methods, practically all these cases can be and are diagnosed before operation. I feel that in dealing with this subject that the most important phase is the diagnosis more than any other factor involved, as the treatment is clearly defined when the diagnosis is made. Our hope in this field rests on the general practitioner, who sees these cases first and usually

hears their story before the day of opportunity has passed. We have had three cases of malignancy of the colon during the last year and none were brought earlier than five months after definite and sufficient symptoms for diagnosis had been noticed by the patient. I was recently called to operate for intestinal obstruction and found the patient with a four-days' complete obstruction and dying of toxemia with a pulse at 160. He died before we finished getting the typical history of a cancer of the sigmoid from the family and the physician. This man had not been examined, but had been faithfully treated for nearly a year. If complete obstruction occurs as the first symptom, which it will do in about 10 per cent of the cases, 70 per cent of these cases are operative and the tumor is still a localized mass and should be resected either at once or secondarily in the two-stage operation after the obstruction has been relieved. One-half of the cases will have chronic obstruction giving abundant warning and opportunity to make justifiable operative diagnosis by taking a careful history and making repeated physical and X-ray examinations. Only one-half of the chronic cases are operable, therefore, complete obstruction cases give a better prognosis than the ones with chronic partial obstruction.

The explanation of this rather startling fact is that the adenocarcinoma type is a hard mass, usually nodular, firmly bound around by a rigorous connective tissue—reactionary, band or capsule—and grows into the bowel, filling its lumen and during the course of the tumor producing a rapid intensification of the edema of the mucous membrane already present, thereby causing acute obstruction; while in the more dangerous type the connective tissue reaction is slight, giving an insignificant barrier, which allows the cancer cells to grow rapidly and easily spread to nearby lymph glands and distant organs. It is the failure to make the diagnosis during the stage when the disease is still localized and not any peculiar malignant tendencies of the process itself, which accounts for the high mortality of cancer in this region. These patients, as a rule, are the victims of procrastination, as malignancy of the large bowel is slow to produce symptoms of grave aspect.

A patient, young or old, with a pain in the left side of the abdomen with alternating periods of diarrhea and constipation having excessive borborygmi, which symptom has been confirmed by the examining physician by applying the stethoscope to the abdomen, should be submitted to exploration without waiting for the tumor mass to so develop that it can be felt through the abdominal wall or per rectum, regardless of what the X-ray shows. But if these cases are properly X-rayed more definite information will usually be discovered. The proctoscope will sometimes be of value, but the average man must depend on the history, which again emphasizes that most important factor in success of the physician, the securing of repeated and painstaking histories. Ninety per cent of these cases have symptoms other than obstruction first and the history of blood and mucous in the stools, fits of diarrhea alternating with constipation, frequent pain in the left abdomen, sometimes loss of weight and appetite where metabolic changes are taking place should always lead to prompt and complete investigation. On examination visible peristalsis can sometimes be found. Gurgling can often be heard and occasionally the mass can be felt. X-ray examination should always be made in the suspicious cases and its value and importance cannot be exaggerated.

The relationship of irritation, ulceration and trauma to cancer of the face, stomach, rectum, uterus and bone is generally recognized and the same theory undoubtedly holds good in cancer of the colon. Twenty per cent of these tumors have been found to be associated with diverticula at the Mayo Clinic and undoubtedly some are due to ulcerations and chronic irritation to which they are frequently subjected by the vigorous antiperistalsis normally carried out by this organ at times loaded with well formed or even very hard masses of fecal matter.

Murphy estimates malignancy of the small bowel, the contents of which is always liquid, to be about one to thirty in the large intestine. Mayo found only five cases of malignancy of the small bowel in 1,498 cases of cancer of the gastro-intestinal tract and we have seen but one.

The over distention to which the colon is

constantly subjected is probably a factor in the production of these cases as the muscularis between the longitudinal bands is very poorly developed and permits the formations of diverticula and chronic irritation, especially in the constipated old folks with lax abdominal walls. A polypus may undergo changes and set up the trouble. In the treatment of these cases one must act promptly but calmly and, although we cannot insist too much on early diagnosis and operation, we must not subject the patients to unwarranted danger by trying to do the radical operation always at the first sitting. They are usually old with depleted systems and deficient heart and kidneys and, in many instances, they come to us quite toxic even when complete obstruction does not exist.

The improvement most of them enjoy after a colostomy is remarkable and we have had some cases to gain thirty pounds during the ensuing ninety days after simple colostomy at the same time combating a general metastatic condition involving practically every organ in the abdominal cavity.

It is ideal, of course, to be able to resect the tumor and make a clear anastomosis at once, but we have had but one case out of twelve where such a procedure seemed justified. The troublesome adhesions to be dealt with at the second operation should not deter us from taking the conservative course and removing the tumor after the colostomy is established and the patient built up, as the malignancy is usually of a very low grade and metastasises slowly. It is difficult to lay down hard and fast lines by which to deal with these growths, but we can be sure about some questions involved, viz., where obstruction exists it must be relieved and, if associated with toxemia, it must be combatted before attempting to do more. It is frequently found on opening the abdomen that one or more loops of the small intestines, and sometimes the omentum, has become adherent or become involved secondarily with the mass. These loops have frequently been successfully resected with the tumor and sometimes two or three loops have been successfully removed. A portion of the bladder and the pelvic regions have been successfully removed many times and adds very little to the gravity of the operation. As a rule, when the tumor is

in the middle of the transverse colon it is better to take out the cecum and remove all the large bowel up to and including the tumor doing, at the same time, an ileocolostomy. If the tumor is in the cecum the same method should be applied. If distal to the middle transverse colon when radical operation is possible resection should be done either in one or two stages. If obstruction is present at the time of operation, or has recently been, the two-stage operation is much safer. All surrounding glands are not malignant, as many are found to be inflammatory, and should not influence one to fail to resect. In some cases, where radical operation is contraindicated, it is sometimes better to do a short circuiting operation rather than the very troublesome artificial anus, which gives the patient just as long lease on life and makes him vastly more comfortable and happy. The type of operation to be chosen in the individual case is important, but must be decided by the operator at the table and would entail a useless discussion here. Where the condition will permit of a radical operation no field of cancer work (the skin excepted) offers greater possibilities and, even where obstruction is present and the condition hopeless, the patients are grateful for the one to three years given to them by the colostomy and, although the subject is one of serious proportions, there is no field of surgery more alluring or beneficial than that of the large bowel.

CANCER OF THE STOMACH AND GALL PASSAGES.

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After years and years of continued and persistent pleadings by the most intelligent members of our profession, urging the members that it was imperatively necessary that appendicitis cases should be operated on within forty-eight hours from the beginning of the onset of the disease if a low mortality is to be gotten, that delay beyond forty-eight hours often means a long, stormy illness, great expense and a very high mortality when compared with the cases operated on within the first forty-

eight hours from the beginning of the attack, we are daily operating on cases that are referred to us after the appendix has ruptured. The profession is slow to grasp in a positive and practical way these truths, and it is the laity who force many of the members to an active realization that they must refer these appendicitis cases to the surgeon before irreparable damage has been done. It is shamefully true that in many localities it is the practice rather than the exception that the family and friends have to urge the attending physician in these cases to call in a surgeon.

This condition is equally true as regards carcinoma of the breast and of the uterus. We are daily referred cases of carcinoma of the breast that have been treated expectantly until axillary glands are involved. The great majority of our cases of carcinoma of the cervix and uterus have been treated for months and years by physicians who attend medical meetings, who read medical journals and still they have not recognized these cases; or, if they have, they have not had the courage to tell their patients and give them the advantage of early surgical assistance. If this be true with appendicitis, with carcinoma of the breast and uterus after all the years when with every gathering of medical men, when in every medical journal these were the prominent and predominant subjects of discussion, how can we expect the general profession to realize the importance of the early diagnosis of carcinoma of the stomach and gall passages!

Carcinoma of the stomach is an almost hopeless condition, unless operation is done early. It is in the same class as carcinoma of the breast with axillary gland involvement. Bloodgood in the June 19th issue of the *A. M. A.*, making observation on 184 cases of carcinoma of the stomach that came principally from Prof. Halstead's Clinic at Johns Hopkins Hospital states:

"Up until 1910 among twenty-one cases of resection, there have been two cures—a little less than 10% of the operable cases, or two cures among a total of 111 cases, or 1.7%. Up to the present time, among the twenty-eight cases of resection between the period of 1910-1915, there is one patient still living in whose case it will be three years since the operation

in August, 1915." This graphically tells us that we must operate for carcinoma of the stomach either in its incipency or before there is carcinoma when there is a chronic gastric ulcer. Beckman of the Mayo Clinic says: "The pathologists at St. Mary's Hospital have definitely proven that cancer develops upon ulcer of the stomach. Seventy-one per cent of the cancers of the stomach excised at the Mayo Clinic show that they have developed upon ulcer. A patient with chronic ulcer of the stomach, then, who does not improve under medical treatment in a reasonable length of time, should be advised to have a surgical consultation on account of the danger of carcinoma developing upon the ulcer."

In an article of mine, published in the September, 1914, number of the *Southern Medical Journal*, I made this statement: History taking by the doctor who asks questions at random without a precise idea of what he wishes to bring out or proper appreciation of the significance of the idea obtained, has very little value; but, to the well informed doctor a definite, complete, incisive and exhaustive history is one of the most valuable of all factors to make correct surgical diagnoses. In making diagnoses early for carcinoma of the stomach and ulcer of the stomach, this is the most valuable of all methods. W. J. Mayo puts the history as of first importance in making the diagnosis, the X-ray secondary, and laboratory findings of little importance. Mr. Sherren, operating at the London Hospital last summer, told his clinic that the X-ray work that had been done for him to diagnose duodenal and gastric ulcers had been very unsatisfactory, and that it had aided him very little in his diagnosis of these conditions. In punched-out, extensive ulcers or in perforations, the X-ray always diagnosed the conditions, but that these were the cases that could always be diagnosed without the X-ray. It is not necessary to have expensive laboratories or X-rays to make a diagnosis early in these cases—the most important aid after all is a well taken history.

Carcinoma of the gall passages means almost invariably gall stones that have been neglected. Early removal of gall stones is a simple operation; gall stones that are not removed will inevitably result in carcinoma in from 3

to 5% of the cases. Even when the stones are removed and a thick-walled, functionless gall bladder is left, the danger of cancer is great. Such gall bladders should always be removed. Carcinoma of the gall bladder, or ducts, when it can be microscopically diagnosed, is an almost hopeless condition—the diagnosis of the presence of the irritating stones must be made, and when they are removed, we have done the best operation for carcinoma of the gall passages.

CANCER OF THE CERVIX.

By Holland M. Tigert, M.D.,
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It is agreed by all that the general incidence of cancer is on the increase. This is particularly true with reference to the gastro-intestinal tract, however, cancer of the female genital tract seems to be stationary. About one death in every eight is due to cancer. Dr. Reuben Peterson, of Ann Harbor, Michigan, estimates that four per cent of all gynecological cases are suffering with cancer.

A study of the New York Department of Health records, made by Howard Taylor, shows that at present only one-fourth of the women dying of cancer of the uterus have had hysterectomy, and that a large number of those operated upon were hysterectomized for hemorrhage or for the relief of other symptoms, and with no idea of cure. Dr. Rufus B. Hall, of Cincinnati, states that during the last five years for every case of cancer of the uterus coming under his observation early enough for an operation that justified the removal of the uterus there were sixteen cases that came too late, and that in the preceding five years the ratio was one to twenty-one. Such experience is typical.

It is indeed a sad commentary on the medical profession that by far the vast majority of women in whom cancer is found have sought advice from physicians for various pelvic symptoms, such a vaginal discharge, irritability of the bladder, pain in the back, spotting, etc., six or more months prior to the positive diagnosis of cancer; and in most instances have

not had even a vaginal examination, but have been treated expectantly with douches and worthless prescriptions, and told that it was "the change of life working on them." Such practice cannot be too strongly condemned. It certainly behooves every physician, worthy of the name, to rigidly investigate and carefully examine every woman who applies for advice presenting any symptom or symptoms which might point to cancer. Observation and study should continue until it is proven that a given case either has or has not cancer.

The cancer-bearing age cannot be definitely stated. It may occur in comparatively young women—I have performed panhysterectomy for cancer of the cervix in a woman twenty-six years of age. Ordinarily it may be arbitrarily regarded as most prone to occur between the ages of thirty-five and fifty, always keeping in mind the possibility of its being seen much earlier or later. As a rule, the younger the patient, the more malignant the growth.

It is stated that ninety-eight per cent of women with cancer of the cervix have borne children, hence it must be considered that traumatism plays an important etiological role in cancer of the cervix as it does in malignant disease elsewhere. No doubt prompt repair of lacerated cervixes would tend to lessen the probability of cancer occurring later.

If one relies upon the symptoms as described by the average text-book as those of cancer of the cervix, few diagnoses will be made sufficiently early for radical operation and cure. Profuse hemorrhage, marked odor, loss of weight, pain, and ulceration are the symptoms and signs of advanced cancer, and the advent of such symptoms, especially if associated with immobility of the uterus and glandular enlargement, are the ear-marks of inoperability and are equivalent to a death certificate.

According to Hall, the early symptoms of cancer of the cervix which are to be relied upon most, in the order of their importance, are:

- (1) A watery discharge.
- (2) An irritable bladder.
- (3) A little irregular bleeding.
- (4) A disagreeable odor.

The watery discharge is not the usual leukorrheal discharge so frequently seen in women;

it is of a thinner consistency, often slightly colored, and not unlike beef brine in appearance. One need not expect the discharge to always be profuse. It usually lasts from a few weeks to a few months; has a tendency to leave brown stains on the linen, and often produces more or less severe pruritis vulvae.

Bladder irritability, as a rule, manifests itself in a more frequent desire to urinate, or by inability to control the bladder when full.

The bleeding of early cancer of the cervix does not amount to the dignity of hemorrhage, although very occasionally rather severe hemorrhage may occur early. As a rule, it manifests itself as a prolonged or profuse menstruation, followed by a more or less profuse leukorrheal discharge, which may subside only to be repeated at the next period. Very soon intermenstrual spotting occurs, which is prone to make its appearance after unusual exertion, following coitus, after the introduction of a douche nozzle or a speculum, and it not infrequently happens that digital examination results in slight hemorrhage. The significance of any bleeding whatever from the uterus of a woman past the menopause ought to be too well known to require mention.

Slight odor may be classed with the early symptoms, but if much marked will usually be found to indicate decomposition from breaking-down tissue, and is a symptom which should not be waited for.

The pain so constantly referred to in textbooks as associated with carcinoma is a late symptom, and usually indicates that the growth has spread beyond the cervix and uterus.

It might be well to call attention to the hardening of the cervix which is sometimes felt by the palpating finger, but this sign will not be discernible if the neoplasm is high up in the cervix.

After all is said, no hard and fast rules can be laid down which will act as an infallible guide to the early diagnosis in every case, even though the physician is imbued with sufficient alertness. In all possible cases the attitude of the medical mind should be that of serious suspicion, rather than that of "watchful waiting."

The removal of a plug from the cervix for microscopic examination should be resorted to

more frequently than seems to be the case. This is a procedure, however, which if practiced indiscriminately will oftentimes be misleading. Where possible it should be performed by a competent gynecologist to whom good judgment and experience will indicate what part of, and how much of, the cervix should be removed for examination.

Curative treatment may be summed up in early diagnosis and immediate operation. It is generally conceded that in the beginning carcinoma is a local condition consisting in hyperplasia of a circumscribed group of epithelial cells and that if discovered in this stage and properly excised, this should end the matter. If metastases have occurred or if the tissue involved is such that a complete excision through normal tissue cannot be made, cure is not to be attained.

The operative technique is not of general interest. Suffice it to say that within the last decade it has reached as complete development as is likely to occur, which is exemplified by the extended abdominal operation originated by Wertheim, and the extended vaginal operation devised by Shauta.

It is customary for surgeons in discourses upon this subject to upbraid the so-called general practitioner for referring cases too late for operation, but in passing it might be well to admonish some would-be surgeons for performing incomplete operations. An improperly performed operation on an early case is quite as great a medical crime as delaying the diagnosis until the golden opportunity has passed. Both of the above-named operative procedures, the Wertheim and the Shauta operations, are exceedingly grave undertakings, and are attended with considerable mortality. They should only be performed by the erudite. The enlargement of the anatomical block removed greatly improves the remote results; this advantage, however, is dearly paid for by an enormous increase in the immediate mortality.

Of late a great deal has been done through the public press to educate women along the lines of cancer, and the American Gynecological Association, in 1912, instituted a propaganda along these lines which cannot be too highly commended, and which should be initiated by

medical organizations throughout the country. Much is to be accomplished and can be speedily attained if the entire profession would enthusiastically take up this matter. It has been suggested that one day in each year be set aside and known as cancer day, and that on that day all the newspapers write about cancer and that all the preachers preach about cancer, so as to arouse the public to the importance of the disease, and to enable an awakened profession to arrive at earlier diagnoses.

Conclusions.

(1) Cancer of the cervix is a common disease, and the vast majority of these unfortunate women are dying without operations performed at a time when cure might be expected.

(2) That a large per cent of these cases have applied to physicians for advice at a time when early diagnosis might have been made, but have been dilly-dallied with until too late.

(3) The cancer age cannot be definitely stated, but women should have close surveillance between the ages of thirty-five and fifty.

(4) As a prophylactic measure all lacerated cervixes should have prompt attention.

(5) Text-book descriptions are not to be relied upon if early diagnosis is to be attained; one is to be guided by the age of the patient, history, and such signs as watery discharge, irritable bladder, irregular bleeding, slight odor, and the physical examination of the cervix plus microscopic examination.

(6) In the beginning the disease is local and amenable to cure if properly operated on in this stage.

(7) It behooves the medical profession to awaken to the importance of this dread disease, and to inaugurate nation-wide educational campaigns, not only for the information of the public, but for the profession as well.

CANCER OF THE SKIN.

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Today the terms *carcinoma* and *epithelioma* have been accepted as synonymous, thus excluding other tumors truly epithelial, but benign. They are ordinarily divided into *super-*

ficial, *papillary* and *deep*, basing the division upon their clinical differences.

In the superficial form we find, usually upon the face, a small, smooth, superficial, waxy-looking papule, hard to the sense of touch and sight and which extends very slowly at the periphery. It gradually flattens in the center, the edges preserving the waxy, raised character. From time to time a thin, closely adherent crust forms over the center and finally ulceration begins. Often the border is composed of well defined separate papules, waxy in appearance. Its base is hard, uneven and red, secreting a scanty, yellowish fluid. This ulceration may not take place for years, the growth being apparently stationary. Again, there may be a spontaneous healing in the center with quite rapid peripheral extension.

The rodent ulcer, occurring in the great majority of cases around the eye or at the border of the nose, is the most interesting member of the superficial variety despite the fact that it is often a great tissue destroyer. It begins as a small nodule in the skin, the stretched epidermis having a shining, mother-of-pearl appearance. At this stage it may remain for a long period or there may be a gradual extension of the edges till it reaches the diameter of half an inch, there is a gradual depression of the center and ultimately the surface gives way in part or totally and an ulcer forms. At this stage the ulceration is often checked by local dressing and a temporary scar formed. Frequently there is a steady progress of destruction of all structures in its way. There is little tendency toward metastasis though it sometimes occurs. These lesions sometimes spread to an indefinite extent, the epithelial proliferation being in a very thin layer in the corium. There is, usually, sooner or later a deeper involvement.

The deep-seated epithelioma develops, either from the superficial or from a nodule seated in the corium or the subcutaneous tissue. It may result from a cancer of a neighboring mucous membrane. It is a pea to a walnut sized mass, hard, reddish or purplish in color, shiny and either rounded or flat. In the course of a few months it breaks down and runs a rapid course as compared to the superficial variety. The ulcer is deep, rounded or irregu-

lar in shape, having an angry, reddened base and an everted purplish or waxy edge.

In the papillary form, which has for its seat of predilection the muco-cutaneous junctures, the mucous membranes, the scrotum and the extremities, the papillary character is primary. It may be sessile or pedunculated and may become fungated. The next stage is ulceration, involvement of deep structures and glands and death within five years.

A cancer has been produced by simply cutting through an ovary of a guinea pig. Trauma, whether mechanical or chemical that displaces epithelial cells provokes it in those predisposed toward cancer as in a provoked naevus, wart or lupus lesion. The long continued use of arsenic occasionally provokes a hyperkeratosis with resultant epithelioma.

Most cases occur after the thirty-fifth year in those subjected to long continued skin irritation, traumatism, or having long existing skin lesions. There is no question as to heredity, but only in the heredity of a skin predisposed, where there is a proneness to the early development of those senile keratoses often resulting in cancer.

Epithelioma of the penis is seen in those with phimosis and who are careless in their personal hygiene, of the lip in the habitual smoker. In England they have the chimney sweep's cancer, a cancer of the scrotum due to soot irritation. They are frequent in X-ray keratoses.

Doubtless when the bacterial cause is definitely determined we will find that a great many lesions that today we call cancer of the skin will have to be put into a different category. Till then, however, it is well to subject them all to one and the same treatment, complete and quick destruction. Pathologically, there is an undue proliferation of epithelial cells and the invasion of structures where they do not belong normally.

Cancer of the skin is not to be temporized with. If possible, the patient should not leave the office after diagnosis till treatment has been instituted.

If there is involvement of the proximate glands no measure other than the knife is warranted, to be followed by the X-ray.

If the lesion exists upon the muco-cutaneous

surface—particularly the lip—excise, and either then or soon thereafter excise the proximate glands, even though they are not palpable through the skin. Follow with the X-ray.

For those lesions that are very diffuse and where excision or caustic would cause too great disfigurement the method of choice would be the X-ray. In the deep-seated lesions the X-ray accomplishes nothing more than the relief of pain, thus it is better to surgically remove as much of the growth as possible and then use the X-ray.

There are some strong arguments in favor of caustics in the smaller lesions. The surgeon's knife may bury beneath healthy skin flaps epithelial cells that proliferate for a long period of time before demonstrating themselves upon the skin surface; with the caustic there is a blocking of the lymph spaces and consequently little tendency to disseminate stray cells, and the intense inflammation provoked tends to destroy outlying low grade cells. Again, if there is a recurrence you are immediately aware of it.

The chief argument against the caustic is that it is the quack's mainstay, that it is worse than useless if not thoroughly applied, and it is painful. The choice of a caustic lies between the potassium hydroxide, arsenious acid and chloride of zinc.

Internal treatment has little or no effect.

The prognosis in all forms must be conservative. In rodent ulcer and Paget's, when early recognized, it is least grave.

CARCINOMA OF THE PROSTATE AND BLADDER.

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Carcinoma of the prostate and bladder is of such frequent occurrence that it demands far greater consideration than we are prone to give it. Like carcinoma in other regions of the body, the hope of a cure depends upon

an early diagnosis and radical removal. Since the advent of the cystoscope, the diagnosis has been greatly simplified and therefore the statistics of the future should be infinitely better than those of the past.

Fulguration, which has proven so efficacious in eradicating benign tumors of the bladder, has not proven successful in removing malignant ones. It should only be used in the non-malignant cases or in the hopelessly malignant ones, for much valuable time will be lost in attempting to remove these growths by this means. Dr. Edwin Beer, in an article in "Annals of Surgery," June, 1915, says: "All malignant cases should be excluded from this therapy." The X-ray, radium and other methods employed in removing carcinomata in other regions, have proven ineffectual in curing carcinomata of the prostate and bladder.

Carcinoma of the Prostate—Malignant disease of the prostate occurs in about 10 per cent of the cases of prostatic hypertrophy.

Etiology: Not known pre-existent gonorrhea is not a causative factor, although heredity does seem to play a part. It almost always occurs in men past 50.

Symptoms: Carcinoma of the prostate is usually of very slow growth and symptoms develop gradually. Pain is usually the first symptom and is very severe as a rule. The pain may be in the prostate, the perineum or the lumbar region, or it may radiate to the genitals, the hypogastrium or the loins.

Haematuria is usually a late manifestation, although it may be the first and only symptom. The symptoms of prostatic obstruction may develop and the inguinal and iliac lymph nodes become enlarged. Later there is loss of weight and cachexia.

Diagnosis: By rectal examination the prostate may feel very hard (bone-like hardness) and nodular. Cystoscopy is of little value unless carcinomatous involvement of the prostatic urethra or bladder has occurred.

Prognosis: In the very early stage before the disease has progressed beyond the capsule of the prostate, prolongation of life and even cure may be hoped for by radical surgical means, but if the peri-prostatic structures are involved no hope can be offered.

Treatment: 1. Prostatectomy, only applicable to those cases in which the disease has not progressed beyond the limits of the capsule.

2. Young's operation suitable for more extensive involvement, consists in the removal of the prostate with its capsule and the bladder neck.

3. Formation of a supra-pubic fistula to relieve obstructive symptoms, put the bladder at rest and make the patient's few remaining days on earth more comfortable.

Carcinoma of the bladder occurs more frequently than benign papillomata. May be pedunculated, but is usually sessile and occurs in two forms: (1) A fungating mass, projecting into the bladder, which may grow to enormous proportions, even to filling the entire bladder. (2) A carcinomatous ulcer, which is usually elevated above the surface of the bladder with a dense hard base.

Etiology: Not known.

Symptoms: Haematuria is usually the first symptom and sometimes is the only one. The hemorrhage begins without warning and continues constantly or at intervals; is without pain (except that caused by passing clots), and is not influenced by rest or medication. It may cease as it began without apparent rhyme or reason.

Pain in the bladder which may radiate to the thighs. After cystitis develops there is pain, dysuria, tenesmus and frequent urination. The urine may contain shreds of carcinomatous tissue. Later, retention with all its attendant symptoms may develop.

Diagnosis: (1) By cystoscopy; (2) by rectal examination by which the induration at sight of carcinoma may be felt; (3) exploratory cystotomy; (4) by the symptoms.

Treatment: May be palliative or operative.

Palliative: Treatment is indicated when the growth is too extensive or patient's condition is too precarious to admit of removal. This consists of rest, diuretics, irrigation of the bladder with alum or silver nitrate. Suprapubic drainage to put the bladder at rest and relieve pain and dysuria and lessen hemorrhage.

Radical: Excision of the growth after

ystotomy. Partial resection of the bladder after cystotomy. Total extirpation of the bladder, with transplantation of the ureters a the colon or externally.

I advocate partial resection and think it a wise and safe procedure, having obtained most gratifying results with it on many occasions, but total extirpation is mentioned only to be condemned, for it is applicable only to those advanced cases where the certainty of recurrence should make us hesitate to add further to the suffering and discomfort of these poor unfortunates. Many live in comparative comfort for several years following supra-pubic drainage. So why subject them to such a formidable operation when the prospect of life is no greater than that offered by drainage, a simple procedure that can be done under local anaesthesia alone?

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RELATIONSHIP OF X-RAYS TO CANCER.

By Jack Witherspoon, M.D.,
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In discussing the relationship of X-rays to cancer the subject naturally divides itself into two parts:

First. The use of X-rays as a means of diagnosis.

Second. The treatment of cancerous lesions by the rays.

Cancer is increasing in prevalence, according to some statisticians, and a considerable part of this increase is in cancer of the gastro-intestinal tract. Whether this is an actual or relative increase due to better means of diagnosis and a clearer conception of the underlying pathology is undecided. It is in this particular field that the X-ray has most emphatically demonstrated its value as a diagnostic agent. Examination of the gastro-intestinal tract by means of the flourescopic screen and serial radiograms has proven invaluable in the diagnosis of cancer. Some roentgenologists warmly champion the advantages of flourescopic examination, while others rely exclusive-

ly on serial radiograms. Concerning this discussion Carman has well said, "There is no competition between them. Each serves certain purposes. Both are necessary for satisfactory gastro-intestinal work." Evidence disclosed by X-ray examination should always be considered in connection with clinical facts. It should in no way displace careful history taking, physical and laboratory examinations.

Cancer of the oesophagus may be diagnosed by the use of the flourescopic screen and bismuth or bismuth shadows on plates. Tousey describes a method of plugging up the cardia with an inflatable, or water-filled bag, and filling the oesophagus with a bismuth-buttermilk mixture for plates. Others, and we have followed this method, make a paste of jam and bismuth and, with the patient standing obliquely before the screen, let him swallow this paste by the spoonful and the bolus may be seen to hang at the constriction and pass through it as a fine line. A series of plates should always be made for more careful study.

A tumor on the stomach wall encroaches on the lumen and is shown on the plate as a filling defect, or a projection of the tumor into the bismuth mass in the stomach. The ragged outline of the filling defect, be it hourglass or cauliflower-like in shape, is almost diagnostic of carcinoma. Case claims a cone-shaped pyloric shadow is characteristic of pyloric cancer. The emptying time is often delayed over six hours and may be from 24 to 48 hours. On the other hand, where there is no pyloric obstruction but an infiltration of the stomach wall, the pylorus may gape and the bismuth flow be continuous.

Carman gives the X-ray findings in carcinoma of the stomach in the order of their relative importance as follows:

1. Filling defects.
2. Altered pyloric function.
 - (a) Gaping of the pylorus.
 - (b) Obstruction of the pylorus.
3. Advanced position of the six hour meal.
4. Absence of peristalsis from involved areas of the wall of the stomach.
5. Diminished mobility; loss of flexibility.
6. Diminution in size of stomach.
7. Antiperistalsis.

Statistics from the Mayo Clinic show that with the aid of the X-ray they are enabled to

diagnose correctly 93 per cent of all their stomach cancers, both early and late. It is the most valuable single method of diagnosis in stomach carcinoma and exceeds in value laboratory examinations or physical examination. This does not mean that these methods should not be used for they certainly have their value. But we have all seen patients with stomach cancer who had hyperacidity and who did not vomit and in whom there was no palpable mass.

It is only by the routine use of X-ray examination of stomach cases that we will detect stomach carcinoma in the operable stage in any considerable percentage of the cases. When this examination is looked upon as a commonplace, and not as a ceremony, the incidence of cures of stomach cancer will appreciably increase. Fluoroscopic examination in these cases should always be combined with a series of plates.

In the radiologic study of the large intestine for cancer the bismuth may be given by mouth and later a series of plates made, or a bismuth enema may be given and the patient fluoroscoped in the horizontal position and plates taken at intervals.

In carcinoma of the large bowel Case makes the following summary of the Roentgen findings:

First. Exaggeration of the colonic peristalsis giving the appearance of peristaltic unrest to the bismuth content above the site of lesion, with arrest or hindrance in the onward progress of the injected bismuth.

Second. Arrest, or noticeable hindrance, in the bismuth column when giving bismuth enema.

Third. Coincidence of palpable tumor with point of hindrance to bismuth meal or bismuth enema.

Fourth. A filling defect in shadow of bismuth-filled colon. Frequently the filling defect is digitated, giving a cauliflower growth. At times it may be annular so that one may diagnose annular carcinoma.

Fifth. The colon is often distended with gas surging backward and forward owing to the alternate antiperistalsis and peristalsis.

Sixth. Marked ileal-stasis when the neoplasm is in caecum, ileo-caecal valve or first part of ascending colon.

Cancer of the bone may be differentiated from other bone tumors by a good X-ray plate in the hands of experienced men. Osteomyelitis, tuberculosis, sarcoma and syphilis are diseases attacking the bone, which can by study of the plates be differentiated from cancer.

In malignancy of the breast, cancer metastasis often occurs in bone—the ribs, spine, ilium, upper end of the humerus and femur are most commonly affected. These are such common sites for metastasis that some advise that no operation for advanced cancers be undertaken until the bones mentioned have been X-rayed and found clean. Metastasis to the lungs may also occur and the X-ray findings in plates are sufficiently characteristic to enable it to be differentiated from tuberculosis, either in the lung parenchyma or in the glands. A peculiarity about metastasis to the bones and lungs is that symptoms indicating this condition may be so slight as to attract no attention and it is only by the X-ray that this condition can be definitely known previous to operation.

Except for the treating of the basal cell, non-metastasizing epitheliomata of the face, the value of X-rays in the treatment of cancer is prophylactic to prevent recurrence after operation and the palliative treatment of non-operative cases, and, in no sense, must the X-ray be depended on alone in an operable case. The epitheliomata common about the face are basal cell and do not metastasize—those occurring on the mucous surfaces, on the sites of irritated warts or discharging sinuses, etc., are usually prickle cell and do metastasize. The last are less amenable to X-ray and must be removed promptly by surgical means.

Pfahler says the results obtained in the treatment of malignant disease depends primarily on the exceeding sensitiveness of the pathologic cells to Roentgen rays, for it is well known to all who have had experience with epithelioma and surrounding tissues, the epithelioma degenerates and seems to melt away, while the surrounding tissues may show no effect or only a little redness.

The nearer the cells approach the embryonal type the more sensitive they are to the rays and the more highly specialized cells

are more sensitive than those less specialized.

On the special sensibility of the younger cells depends the ground principle of the Roentgen treatment, that is, the pathologic cells will be affected by the X-rays that have already passed through healthy cells without doing them harm.

Intensive X-ray treatment has been tried by numerous workers on cancer of stomach, esophagus, uterus and other organs with different success as to cure, but marked recession in the size of the tumor and metastasis may be delayed.

A tube with very hard penetrating rays is used and the skin is protected with sole leather and the tumor is approached from as many different directions as possible through varying areas of skin overlying it. This has been called "cross firing." Very lately Pfahler has reported some beautiful results in treating secondary tumors after breast amputations by this method, using the new Cool-edge tube. It is recommended that as soon as possible after a malignant breast is amputated and the axilla cleaned out the whole area be submitted to thorough radiation as a prophylactic measure to destroy any outlying cells and so prevent recurrence.

A number of German workers have studied the effects of X-ray treatment on advanced malignancy and some of them have reported favorable results. Bumm and Warnekros conclude that the X-rays are more efficient in the treatment of deep-seated malignancy than the largest available quantities of radium. They say that the effective range of radium is 3 c. m. beneath the surface, whereas, on account of the greater power of the X-ray tube, it can be placed at a considerable distance from the skin, largely eliminating the burning rays, and yet deliver in the depths a dosage of radiant energy in excess of that from a large quantity of radium. They estimate that it would require 75 grams of radium applied directly to the skin to deliver in a given unit of time the same dose of energy at a depth of 2 c. m. that would be delivered by a suitable Roentgen tube placed 22 c. m. from the skin surface. To prove this they took six women, with inoperable carcinoma of the cervix, all with cauliflower bleeding masses,

and rayed them from the abdomen and back. In all six cases the tumor completely disappeared in a few weeks. Pieces of tissue removed for examination showed almost complete destruction of the cancer cells, those found were undergoing degeneration, and in one case no cancer cells were found.

With these massive doses of the rays great care must be exercised to prevent burns and injury to other organs. Improvement in apparatus and technique seems to hold out some hope that in the future some way may be devised to help the cases now considered hopeless. However, it will take a large series of cases, observed over a considerable period of time, to establish the value of this method.

INOPERABLE CARCINOMA OF THE UTERUS.*

By Wm. T. Black, M.D., F. A. C. S.,
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By the term inoperable carcinoma of the uterus is meant those cases which cannot be permanently relieved by a radical cutting operation, but does not mean, as the term signifies, that no operative procedure should be instituted. I cannot do better than quote Morris' definition of inoperable cancer, viz.: "The term inoperable means that the disease cannot be entirely eradicated, or permanent immunity hoped for, by a cutting operation, or by actual cautery, or any escharotic aiding the knife." You therefore see, from the above definition, that cases which are spoken of as inoperable are not necessarily cases which have progressed to such a degree that the surgeon denies the patient some form of treatment and offers some hope for their relief. While not being able to offer complete eradication and permanent cure, you can give them some hope, instead of sending them away to die without an effort to relieve them.

To tell whether a cancer of the uterus is operable or inoperable depends upon the judgment of each operation. Surgical risks should be run in cancer, however, which would not be

*Read at meeting of West Tennessee Medical and Surgical Association, Dyersburg, May, 1915.

justifiable in other conditions. In deciding whether the local involvement has progressed too far for a radical operation experience is required which only comes through observation of a number of cases. In deciding whether the case is operable or not, one must exclude septic conditions, which may only be a coincidence, must not mistake periuterine tumors, pus tubes, ovarian cysts, etc., for a cancerous involvement, nor should you overlook a fixed uterus caused by the above conditions. Enlarged glands are not always a contraindication for operation, for they may be involved from other sources.

In cancer of the body of the uterus the glands are often not involved. Kronig reports thirty-four cases with the glands involved only five times, one case inguinal, two iliac, two lumbar. In cervical cases the glands are involved in sixty-four per cent of cases, according to Schauta. In only thirteen per cent were the glands confined to the pelvis—the only ones which can be thoroughly removed. The latter per cent is borne out by Kundrat of Wertheim's clinic, who reports that in only thirteen per cent of their cases could the glands be removed. Hartman, Ocklecker, Rosthorn, Cullen, Sampson and others point out the low per cent of glandular involvement which can be thoroughly removed. Therefore we conclude from the above that the Wertheim-Reis operation does not necessarily prove that the case is one which is curable in only a small per cent of cases.

The mortality is so high in this operation that it is rarely justifiable. If the inaccessible glands could be removed, then would the high mortality be justifiable. When the uterus is fixed and the peri-uterine tissues thoroughly infiltrated, when the anterior vaginal wall is involved to the bladder, when the rectum or utero-sacral region is beaded, when we have the bladder involved, or ureter infiltrated, then the case is inoperable. If in doubt, a cystoscopy and ureteral sounding will clear up the later conditions, remembering the suggestion given by Clark of Philadelphia, "that cancerous infiltration closes the ureter, but inflammatory conditions do not." The vaginal involvement may be mis-

leading, for it has been shown by Brunet and by Asserto that the vaginal mucous membrane may appear normal while the vagina is badly involved.

About two years ago I had a patient with cervical carcinoma extending on to the vaginal wall, with the uterus fixed and the broad ligaments filled with what was thought to be a cancerous infiltration, but which proved to be an inflammatory condition of the tubes and ovaries. A radical operation was performed and the patient is doing well today. The above case was thought to be irremovable, until the pelvic structures were explored.

Certain patients will apply for treatment with malignancy of the uterus who will have other diseases to which we might attribute their condition if sought for and not reject them as inoperable. In such cases not too long a delay should be practiced, but an attempt to relieve them is essential. It is at times necessary to stop hemorrhage and allow the patient to recuperate for a few days before proceeding with any radical operative measure.

Lumps or tumors located elsewhere in the body may occur synchronously with a cancerous uterus and yet may be benign in character. Metastasis would, of course, exclude complete eradication of the cancer cells, but the patient must not be told always that the tumor she possesses somewhere else is a metastasis, for it might be only benign and a coincidence.

Many agents have been tried for the relief of cancer, from poultices made from green frogs to serotherapy, and from molasses poultices to the radium rays, and yet when we are called too late to perform a radical operation, we are compelled to use some empirical agent.

The X-ray acts as an analgesic and has a destructive effect upon superficial cancers, in some cases causing the cancer to disappear and seem cured, but the result in uterine cancer has not been so flattering. Since the invention of the Coolidge tube great promises are given and expectations looked for. It is claimed for the latter that a very penetrating ray is produced simulating the gamma rays of radium. The X-ray should be used often as a post-operative procedure.

Radium, like the X-ray, has been more beneficial in superficial cancers, but it undoubtedly has prohibitive properties and is of value. It is still somewhat in the experimental stage and it remains for men and institutions of means to prove its true worth. Czerny claims that mesothorium is more serviceable than radium.

Fulguration, electro-coagulation (Doyen) and thermoradio therapy (de Keating-Hart) has been used to advantage. Bainbridge says, "The use of light in the treatment of cancer is mainly restricted to the alleviation of pain, beyond this it is of no real value and has been generally abandoned for other methods."

The electro-cautery (Byrne method) has supplanted arsenical paste, chloride of zinc, and other chemicals. It consists of curetting out all of the broken-down tissues, using a styptic to prevent bleeding, followed by high amputation. This method may be followed later by a complete removal, or followed, as suggested by Frederick, by an immediate radical operation.

The use of the ligature to produce starvation of the uterus with lymphatic block has been extensively employed by Fritsch, Kelly, Pryor, Baumgartner and others. It, like the above methods, has some virtue, but the number of methods which have been tried and are at present in vogue is proof positive that none are what is to be desired.

It has been proved by Ehrlich, Jensen, Lambert, Loeb and others that cancer cells are vulnerable to heat; therefore any method which will convey sufficient heat to the cancer cells without affecting the rest of the body should be our aim in the treatment. A temperature of 113 degrees F. will destroy a cancer cell, but not a normal tissue cell. Temperature should be, according to Percy, 122-131 degrees F. in the cancer mass. It has been suggested that the beneficial effect of serum, vaccines, etc., might be due to the fever from the reaction produced. Unless you have a reaction after the administration of serum, vaccines, etc., the results are not all good. The seemingly good effects following infections, as erysipelas, may be due to the elevation of temperature. Lower states

that anaemia, ~~exhausting diseases~~ and febrile conditions retard the growth of cancer.

If heat is the agent required for the inhibitory and curative treatment of cancer, then the question arises, which is the best method of applying heat? If heat is properly disseminated it must be given below the charring degree. If given too hot a charcoal is produced which prohibits the distribution of heat; therefore, tissues outside of the charring zone are not heated to 113 degrees F., and the cancer cells are not destroyed. Charring also prevents drainage, a thing very necessary after the application of heat. It has been pointed out by Wassermann that a severe intoxication may be produced by absorption of the products of the killed cancer cells. While the cautery as used by Byrne was a marked advance over the previous forms of treatment in inoperable carcinoma of the uterus, yet the method devised by Percy is a step forward in importance and advantage. The method as suggested by him of opening the abdomen and having an assistant guide the uterus and watch the temperature while the heat is applied below, without curetting or cauterising, for a sufficient length of time for the heat to penetrate far into the tissues is an advance, to my mind, which surpasses all other methods. It is not only useful in those cases which are irremovable, but is useful and should be used either at the time of a radical operation or preceding the operation several days.

Clark, of New Orleans, has been unable to find cancer cells in two uteri after the Percy technique. Percy reports his inability to find cancer cells in a badly affected uterus after eight months. It has also been suggested that ligation may also accompany the Percy operation, especially if hemorrhage is an important factor. The ligature can be applied at the time the abdomen is opened.

I have used the Percy method in several cases, some too recent to report, but three cases are over a year old. One patient lived within a few days of a year and died of suppression of the urine from a kidney lesion. The latter case had been bedridden for eight weeks when the Percy technique was instituted. She was very anaemic, had been bleed-

ing constantly for over three months and had a foul discharge. The cervix and surrounding tissues were badly involved and the uterus firmly fixed. She was cadaverous-looking and I considered her chances as poor as one's could be. After this method was performed she gained in weight, seemed perfectly normal, and never had a return of the bleeding nor discharge, and died of nephritis.

I am unable to get a report upon one case. The third is said to be doing splendidly.

I believe, from my limited experience, that this method of applying heat yields better and longer results in inoperable carcinoma of the uterus than any other method with which I am familiar. Theoretically and scientifically, heat is the agent which offers most for inoperable carcinoma of the uterus.

TREATMENT OF CANCER AND PRE-CANCEROUS CONDITIONS.*

By J. M. King, M.D.,

Professor of Dermatology, Vanderbilt University, Nashville, Tennessee.

This subject, while very old, is ever an interesting one to me, and I think to every body of medical men. The horror of cancer, its usual fatal termination if untreated, the large mortality rate, the anxiety felt in undertaking any case of cancer, and above all, the unknown cause of the disease, make this one of the most important questions before the medical world today.

In the following discussion I wish to confine myself to the superficial varieties, and to speak from my experience with many cases treated in all stages of development, from those in the very beginning to those so far developed that treatment, except palliative, was not to be considered.

The first point to discuss is the pre-cancerous conditions and the importance of their diagnosis.

Every cancer, it matters not how large it may be, began to develop from a tiny group

of epithelial cells, which have taken on a wild and exuberant growth. These cells respond more readily to whatever this stimulation may be after 35 or 40 years of age. Certain styles of skin are more susceptible than others. An individual with thin, tender, fair type of skin, also one with excessively greasy skin react to irritating influences, such as sunlight, more readily than the darker individual with normal skin. While we find more cases of skin-cancer on fair, tender skins, no types are exempt, not even the dark skin of the negro. The pre-cancerous conditions do not always present the same clinical characteristics, thus making a clinical diagnosis more difficult. However, to illustrate the most common condition, if we have a patient with thin, fair skin, with dry, scaly patches, senile keratosis, about the face, the cheeks, ears and neck, or if we should have another patient with a greasy, sebaceous skin with collections and crusts of sebaceous matter stuck to the skin here and there on the face, we should regard them both as pre-cancerous conditions. The skin in these scaly and greasy areas is undergoing changes, such that will, later on, take on the wild exuberant cancer growth, and they call for immediate prophylactic treatment. The variety known clinically as the superficial variety originates from the conditions cited above, while the deep seated and papillary varieties arise from deeper seated epithelium, as sebaceous glands. The superficial or discoid cancer thus developed is usually flat, scaly, slightly indurated on account of the increased growth of epithelium. They may be shallow ulcers about the center, due to cutting off of nutrition by the crowded growth of cells.

The groups of cells which begin to take on the cancerous change may be deeper seated in the skin—in a hair follicle or sebaceous gland—and produce an entirely different lesion from those just described. In these cases, instead of having a greasy or scaly area, there is a small tumor-like growth which pushes toward the surface of the apparently normal skin, later bulging on the surface to slight elevation and appearing rather clear and translucent on account of the crowded growth of epithelial cells, and feels firm and hard to the touch, and which may be smooth or slightly nodular, but not rough or scaly. This growth

*Read at meeting of Middle Tennessee Medical Association, Lebanon, May, 1915.

may look very much like a wart sometimes and be mistaken for one, but usually a wart is rougher on the surface on account of the papillae.

Cancer may start in other ways. A mole from any irritation, such as a cut or bee sting, may become cancerous, especially the plump, red or black mole. Cancer may start from a wound, or from any continual stimulation, like that from a cigar or pipe stem or from a burn. Even a wart may become cancerous.

Having so many ways of origination, cancer is sometimes difficult to diagnose, but there is nearly always something characteristic in its appearance. A section under the microscope when in doubt will always reveal the true nature of the growth. The main point to stress is an early diagnosis—that is in the pre-cancerous or in the early stage of development. Sometimes cancer must be differentiated from syphilis and lupus.

I shall not go into the pathology of the subject. It is practically the same in all the varieties—the superficial, deep-seated and papillary—the epithelium taking on a tubular or lobular form of growth.

I shall now describe what I consider the most acceptable lines of treatment for these different conditions, beginning with the pre-cancerous and taking up the incipient cancer, the ulcerating, the deep-seated, cancer of the tongue, lip, alveolar process and cervix uteri.

The methods that I have adopted have been taken with a view of giving a cure in the shortest time and with the best cosmetic results, for the most of these lesions occur about the face, neck and ears. The cosmetic effect should always be considered, but complete eradication is the keynote of treatment.

The scaly patch or the greasy patch should be treated with the carbon dioxide stick. One application of ten seconds to two minutes is sufficient. This produces a reaction, which seems to bring about a readjustment of the abnormal epithelial cells. Healing leaves a smooth, healthy surface, which may be a little whiter than the surrounding skin. Patients with thin, tender skin should be advised to protect the face from the direct sun rays by wearing a broad-brim hat.

Suspicious or prominent moles should be removed with the electric needle by electrolysis,

or with repeated applications of the carbon dioxide stick. If a mole becomes irritated and inflamed, it should be removed with the cautery and X-rayed. The very superficial cancer may be treated with the X-ray alone.

Small translucent cancer, slightly elevated, the size of a shot, may be curetted and the base treated with acid nitrate of mercury with satisfactory results, as a rule. The X-ray could also be used with efficiency, without curetting, if the lesion is on the face and a better cosmetic result is desired. If the cancer is larger, the X-ray should always be used. The curette and cautery may be used first, followed by the X-ray until a marked dermatitis is produced. A pastile dose may be given every three or four weeks in selected cases. I usually expose these cases two or three times a week until a marked dermatitis appears, then stop until the dermatitis has almost subsided, then give two or three more treatments. After this allow the lesion to heal and keep it under observation for one or two years. Ulcerating or deep-seated cancers, the size of a quarter to a silver dollar, should be excised either with the cautery or the knife or curette, treating the open wound and a margin of a half inch or more around the wound with X-ray, covering the healthy surface with tin foil. Other procedures could be followed, but the above course has given me good results. The X-ray alone could be used in the majority of cases, but it would prolong treatment.

Cancer of the margin of the eye-lids should be cauterized with the electro-cautery, then X-rayed, protecting the eyeball with tin foil.

Cancer of the inside of the nose should first be removed with the cautery, going wide of the lesion, using your judgment with reference to the X-ray after-treatment. I have used the X-ray in some cases and have not used it in others where the growth was very small.

We must undertake the treatment of cancer of the lip with great caution. Some may be primarily treated with the X-ray, others should be excised, and then treated with the X-ray, and still others should only be treated by the radical surgical operation, removing the lip, sub-maxillary and cervical glands.

I have treated successfully several superficial cases of the lip with the X-ray alone. A per-

sisitent, scaly patch on the lip, what we should term a pre-cancerous patch, may be removed with the X-ray successfully.

If a nodular cancer has formed on one side of the lip, and has passed down into the body of the lip, yet it can be well outlined and you can feel apparently healthy tissues surrounding it, excision, as wide as possible, followed by X-ray to the closed wound, would be safe treatment. I can report on twelve cases of this type treated from seven years to one year ago without recurrence.

The extensive cases of the lip should be done by radical operation. Every suspicious lesion on the tongue should be examined microscopically.

Operable or small-sized cancer of the tongue should be excised preferably with the cautery, with no after-treatment with the X-ray or radium. Melanotic cancer should be radically removed by excision and the open wound strongly X-rayed.

Early cancer of the alveolar process should be treated by removing the teeth, also the bony parts adjacent with thorough application of the cautery to the entire area and the surrounding mucous membrane. I have seen such cases go very bad from the failure of early radical treatment.

Inoperable cancer of the cervix uteri may be benefited by the X-ray treatment through the vagina and also by cross-fire through the abdominal wall.

In a general way, I would like to say that in dealing with cancer, it is better to over-treat it with the X-ray and to remove surgically more tissue than it seems necessary sometimes. It is better to err in overdoing, than in not doing enough.

At this point I may state the reason for this course of treatment. With the curette or cautery the large mass of epithelial tissue may be removed, leaving around the margin and through the base many prolongations of epithelial growth. The X-ray is then applied to destroy all of the remaining cancerous cells. The X-ray has a specific action on epithelium and if used strong enough will destroy all of the cancerous epithelium connected with the growth under treatment. An area around the cancer should always be ex-

posed in order to kill all epithelial prolongations into the healthy skin. This is why the X-ray has proven to be superior to all other methods of treatment. The curette and cautery are only adjuncts, the X-ray the curative agent.

Skin cancer is being more successfully handled today than ever before, on account of the X-ray and similar treatment, and also because physicians are keener in diagnosis. Surgery has not improved very much with reference to superficial cancer. The day for pastes and caustic salves has passed, except in rare cases. We have at the present time the means for successfully treating superficial cancers, and the superficial type will reach the incurable and inoperable stage, if allowed to go on. The most important point is to recognize these conditions early—the pre-cancerous and cancerous—and be courageous enough to tell the patient what the trouble is, since now they can be cured. We really need not have the hesitancy that we had a few years ago in telling a patient definitely about a curable superficial cancer, and the patient should be relieved of the feeling of fear which he justly had only a few years ago. Many members of the profession today entertain a belief that cancer cannot be cured, or they have serious doubts about it, and for this reason advise patients who come to them for consultation about a cancer to let it alone. Then the patient goes to a quack. Many instances I could cite to you of this nature. But we may be assured at the present time that the great majority of cases can be cured in the hands of regular physicians when properly handled by the improved methods of treatment.

PERIOSTEAL SARCOMA WITH METASTASES.

By Herbert Acuff, M.D.,
Knoxville, Tenn.

In the preparation of a paper upon the subject of bone cancer, one is at once surprisingly impressed with the scarcity of authentic literature on the subject.

From one or two cases in particular which

have come under my observation recently, I shall deduct my conclusions for the subject matter of this paper.

About three years ago a young man 25 years of age consulted me with a small nodular growth presenting on the anterior aspect of the right tibia, and complaining of pain of a pressure character, particularly at night. Having been a railroad man for years, and further attested to by the superficial scar which remained near the site of the tumor, I suspected some previous traumatic influence as an etiological factor. However, the patient failed to recall the incidence of such an injury. An osteotomy was advised, but moving to another section he was operated on by another surgeon; the periosteum split longitudinally, and the excess of bone tissue removed with a bone curette. Prior to this there had been no involvement of the overlying soft tissues apparent, but some six months later a cutaneous involvement occurred which was treated by Roentgenotherapy, antiseptic measures, etc., and which after some three months healed.

Twelve months later the patient again presented himself with an acutely tender gland presenting just above Poupart's ligament on the same side as was the affected tibia. At this time his physical condition showed slight evidences of cachexia, loss of weight and strength, anemia, but no elevation of temperature. He was treated expectantly for thirty days, after which celiotomy was performed, and disclosed six intraperitoneal mesenteric glands, varying in size from an ordinary egg, to the human kidney. The upper abdominal region was carefully read for other metastases, but nothing was apparent. The interesting deduction to make is that pathological examination unquestionably diagnosed the tumors as giant celled sarcoma having many nuclei, also a few spindle and round cells. On cross section the color was the typical maroon, and was accordingly diagnosed an osteosarcoma probably beginning as a preosteosarcoma. With a diagnosis of this type of sarcoma we have more to explain in clearing up the attending metastasis. Growing rapidly as this did, the pathological demand for an increased vascularity resulted in the weakening and dilation of the veins present, and the establishment of

venous canals which are lined by an imperfect and feeble endothelium, while the outside is bounded by sarcomatous cells.

These vein cells are most instrumental in the role of metastases and this knowledge, coupled with the fact that the iliac glands were enlarged and had to be dissected away from the iliac vessels at the time of operation, further attested to the guilt of metastasis through the medium of the venous walls.

If the foregoing deduction be true it would only be natural to assume that venous walls carrying metastasis to one part of the body would in time be no less generous to all areas traversed by the venous system, which in turn would be productive of the same fertile crop of adjacent sarcomatous glands as before described, and the curtain would rise in the closing scene to reveal a general sarcomatosis and death. To be perfectly fair, this is just what happened.

I am perfectly cognizant that sarcoma rarely affects lymph glands, unless it contains lymphatics itself, and this is the exception rather than the rule, and for this reason I submit the observation noted on this case.

Just a few words relative to the diagnosis.

Periosteal sarcomata vary greatly in both malignancy and the types of the diseases, hence the difficulty in outlining definite characteristics. As a rule, if section of the suspected growth proves to be soft in consistency and of the embryonic type, it is well to prognosticate rapid malignancy. On the other hand, the harder they are, and the more nearly they approach the cartilaginous, bony or fibrous tissue, the slower in growth and the less malignant will be the prognosis.

These sarcomata are usually seen near the ends of long bones, not usually painful, little or no tenderness, slight, if any fever, often some edema with distended veins over it. The X-ray offers a most valuable assistance in differentiating sarcoma from exostosis, callous formation, etc. In exostosis the growth is slow and regular, and the resulting radiogram shows this perfectly just as the section of a tree shows by its rings the uniformity and regularity of its growth. In malignancy the ossification takes place in a ragged and irregular way, and the resulting radiogram is spotted and not uni-

form. Again, oftentimes small patches are breaking down and these appearing lighter than surrounding parts add to the heterogeneous arrangement of the picture. Suffice it to say, however, that any gross irregularity in the substance of a bony growth means malignancy.

I would not presume to classify sarcomata or carcinomata, neither do I care to repeat the many theories which have been advanced, defended, but exploded relative to the true etiological foundation of cancer, but only to submit some observations which may be used in actual combat with this most deadly enemy, rather than to exceed the most extravagant speculation of theorists in an effort to dismantle the cryptogenic cloak of this malady and unfurl its secrets to an anxious and inquiring profession.

This spotlight of scientific investigation is centered to stay upon cancer. The brains of scientists such as Zerney, Ehrlich and others are incessantly unfolding, little by little, its hidden mysteries.

Roentgenotherapy, serotherapy, thermotherapy and surgery have allied their forces for the eradication of cancer. The crying public implores it. The progress of science demands it. If this paper tends in some small way to more unify the scientific array against cancer, its mission will have been accomplished.

A WORD OR TWO ON CANCER.

Editor The Journal:

I have just returned from Rochester, Minn., where I attended the meeting of the American Surgical Association that had up for discussion as one of the subjects, "Cancer of the Breast." It was quite apparent that most of the gentlemen held a more conservative view than formerly in operative measures when the affection comes under care early (and more are seen now by the surgeon early), with no neighboring lymphatic involvement. Many went so far as to suggest only a partial removal of the breast (the old Thomas operation) should be made, while others proposed the use of cauteries in suitable cases, claiming in many such procedures there was just as little opportunity for recurrences as in the more extensive operations

of Halstead or Rodman, which cause not only great deformity but leave ugly scars. Then, too, the more radical operations, from recent statistics, were not encouraging on account of so many failures.

Of course, it was held that radical methods had to be resorted to in advanced and serious cases, but many of the fellows held it was best not to operate at all in such cases, believing from records the victim would live as long or longer under X-ray or radium treatment when operation was declined.

Another important opinion expressed by members of the Association was not to depend on "frozen section" examinations during an operation, as they were misleading and worthless.

DUNCAN EVE, SR.

Nashville.

Editor The Journal:

In reply to your letter of June 11th I beg to offer the following note for your symposium on cancer to the July number of the Journal.

The strongest argument that I can offer in favor of the agitation of the cancer question is the fact that I am consulted three or four times each year by patients with cancer of the breast or of the womb which are totally hopeless. It goes without saying that these patients could all have been saved by early diagnosis and early operation.

I am fully convinced that improvement of our cancer statistics is not to be obtained by more radical late operations, but in a recognition of a pre-cancerous stage and early lesions with earlier operation.

O. S. M'COWN.

Memphis.

Editor The Journal:

The general practitioner probably sees more disastrous results from neglect of early surgical interference in cancer than in any other feature of his work.

Especially in young subjects (under middle age) in whom not all tumors are benign by any means, whose absorptive functions are active, should any tumor or sore receive immediate attention, before secondary involve-

ment of other glands or organs make any surgical procedure useless.

Another class of cases with cancerous growths or sores too often neglected are the very old, in whom the operation is not advised because the physician expects the patient to die from senility or other trouble before the cancer can make much progress. These patients often live until the cancer becomes horribly painful and offensive. It would certainly be better to undergo the doubtful dangers of surgery rather than face the sure and direful consequences which practically always come from neglect of such conditions.

K. S. HOWLETT.

Franklin.

Editor The Journal:

I believe that if all uterine lacerations were repaired, and all tumors, even if there were no signs of malignancy, were removed early—as soon as discovered—in a few years cancer would be almost eradicated from the human race.

J. W. BRANDAU.

Clarksville.

Editor The Journal:

Replying to yours of recent date in reference to the importance of early diagnosis of cancer will say that it is almost a daily experience with me that inoperable cases of cancer are brought to me who give a history of an illness or of a tumor, of vaginal discharge, a leucorrhoea or bloody flow, which has continued for months and which should have excited their concern as well as that of their family doctor, but which they have neglected until the condition has gone beyond the possible reach of surgery. I have now in the hospital two cases of uterine cancer in which I have had to content myself with the use of the actual cautery as a palliative because they were neglected until radical operation was out of the question. I am doing everything possible to impress the importance of early attention to these cases on the physicians in this section of the state.

C. P. FOX, M.D.

Greeneville.

SOME CANCER STATISTICS.

According to the statistics of the Bureau of Census there were 49,928 deaths from cancer in the registration area of the United States during the year 1913. The registration area in 1913 comprised states with 65.1 per cent of the total population of the United States. On this basis, the deaths from cancer in the entire United States in 1913 were 76,600.

The death rate per 1,000 population from all causes in the registration area in 1913 was 14.1. The death rate from cancer in the registration area in the same year was 78.9 per 100,000 population. In 1900 the cancer death rate was 63 per 100,000, and each year, with one exception, the cancer mortality has shown a distinct increase. It is very probable that the rate published for 1913 is too low, since the chances are that many deaths returned as due to "tumor" were really due to cancer.

Approximately 40 per cent—19,767—of the deaths from cancer in 1913 were from cancer of the stomach and liver.

The female generative organs were involved in 7,706 of the fatal cancer cases in 1913.

Cancer of peritoneum, intestines, rectum was returned as the cause of death in 6,625 cases.

Deaths from cancer of the breast occurred in 1913 to the number of 4,592.

Cancer of the buccal cavity accounted for 1,966 deaths.

Skin cancer was responsible for 1,725 deaths.

The increasing cancer mortality is explained in various ways, some contending that more accurate diagnosis is responsible, others asserting that better collection and compilation of statistics explains the increasing death rate, and others maintain that cancer is actually increasing in frequency. What matters it whether the one or the other is the correct explanation? **The essential fact is that more than 75,000 persons are dying in our country from cancer each year. What are we going to do about it?**

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EDITORIALS**CANCER.**

The Commission on Cancer of the Pennsylvania State Medical Society, through its Chairman, Dr. J. M. Wainwright, has asked the Journal to co-operate in a nation-wide agitation designed to awaken the rank and file of the medical profession to the urgent necessity for the early diagnosis of cancer and to the urgent importance of early operation in cases which are or which may become cancerous. The July Journal is the result of this request from the Pennsylvania Cancer Commission.

Too many times the committees and commissions of our societies are inactive. They are named and appointed and that's the end. The Pennsylvania Cancer Commission is not that sort. On the other hand, this body has taken itself seriously and has done something worth doing. Nor has its work been limited to the membership of the state organization whose creature it is. After a serious and intelligent study of the subject, the commission prepared six short articles on cancer for publication in the lay press. These were not only published in the newspapers of Pennsylvania, but they were widely copied by the press of other states.

The work of the Pennsylvania Commission which will be of greatest value, perhaps, is that done in collecting trustworthy "statistics that indicate as nearly as possible the condition in which cancer patients come to the surgeon." The report shows facts which should arouse the physicians of the land to a more earnest study of the subject of cancer, to more careful diagnostic methods, to greater insistence upon proper surgical treatment. Of a group of 382 cancer cases reported to

the Commission, 146 were males, 236 females, the average age 51. Even in the superficial cancers only 68 per cent were operable when sent to the surgeon, while only 48 per cent, less than one-half, of the deep-seated cancers were operable. This, in view of the fact that surgery is our only known means for prevention or cure of cancer, is a distressing revelation. Of course, some cancer cases will refuse operation, but the facts above presented can mean only one thing—that doctors have temporized with patients needing surgery.

It is further shown that in almost half of the cases of fully developed cancer there has been a "precancerous condition" which might have been cured by proper treatment, thus preventing cancer development. This can only mean that too many doctors are negligent of chronic irritative conditions in organs where cancer is prone to grow.

Further, the report shows that in superficial cancers the condition has been apparent to patients on an average of one and one-half years before surgical consultation, while in deep-seated cancers signs of the disease have been evident to patients on an average of one year and two months before coming to the surgeon. This shows that responsibility must rest somewhere for public enlightenment about cancer and that the medical profession must assume it fully and at once or see to it that it is properly placed. It also explains the near-failure of surgery in cure of cancer.

Worse than all, the report indicates that in a relatively large number of cancer cases reporting to physicians the patients get no treatment or poor treatment. Three per cent of the cases of cancer of the breast were not even examined by the physician first consulted! Think of it! Thirteen per cent of the cases of breast cancer were advised to await developments or were given salves or ointments for local application! Nine per cent of the cases of cancer of the stomach were not examined by the first doctor seen! Twenty per cent of the gastric cancers were given what the Commission calls "maladvice"! In cancer of the cervix the first physician consulted made no local examination in ten per

cent of the cases! And advised "waiting for developments" in twenty per cent!

The report of the Cancer Commission of the Medical Society of the State of Pennsylvania is a severe arraignment and an eloquent appeal. Frankly, we do not believe that the rank and file of Pennsylvania physicians are at all worse than the rank and file of doctors in Tennessee, nor in other states. Hence this "Cancer Number" of the Journal.

OUR CANCER PROBLEM.

The world's literature on cancer in its protean manifestations is stupendous and almost challenges the imagination, yet this enormous amount of writing is not commensurate with the great problem confronting humanity and will never be until the cause of cancer and its cure are discovered and the human race is released from the bondage of this increasing scourge.

In this issue of the Journal we are adding our small quota. And so we have collected a number of essays on some of the various phases of cancer by men of our own Association to the end that we may be re-awakened to the realization of the importance of cancer.

Any one who will take the time can see from the reports that cancer is on the increase; not a relative increase, but absolute. Any one who even runs and reads knows that cancer can be cured, but only when discovered early. There is the cancer problem! There is the cancer problem as it confronts the general practitioner and the public. Until the cause of cancer is discovered, or an absolute cure for it in all its stages is found out, or both, the facts that cancer is on the increase, and that if discovered sufficiently early there will be a cure in the majority of cases are all that need be known by the family, or the family doctor, if he so elects! But the family doctor knows more. He can discuss learnedly the theories of the cause of cancer; he can give you the relative frequency with which it attacks various organs; he can give you the percentage of cures from operative and other procedures. He knows, also, that the diagnosis in the early stages is at times admittedly difficult even under the

most auspicious surroundings and advantages. He knows that a lump in breast of any woman of whatever age should be regarded as malignant until it is proven benign. He knows that any vaginal discharge in a woman past the menopause should be regarded as of cancerous origin until it is proven otherwise. He knows that moles and warts on the face and elsewhere of his patients are potentially malignant and should be removed. Under the circumstances the duty of the physician is plain. He should prepare himself to make these differential diagnoses and to institute the proper therapeutic procedures, or he should call in the aid of other competent men to assist him. Anything less than this is negligence.

The faith and confidence imposed in the physician by the patient entails a tremendous responsibility. The physician is consciously or unconsciously aware of this and endeavors to fulfill the high ideal; but, unfortunately, the physician is just a poor weak mortal after all. He becomes negligent, or indifferent, or he attaches no importance to the patient's complaint. He infuses this atmosphere into his patients and then—it is too late! Remember, our cancer problem is that cancer is on the increase, and that early recognition is the only hope. Here, as in other instances, "eternal vigilance is the price of liberty"—and life!

G.

FUMIGATION.

The New York Health Department has abandoned the useless procedure of fumigating houses and rooms in which cases of scarlet fever, diphtheria and measles have been confined. We are delighted that a well directed Health Department has taken this step, which will help to disabuse the public mind of the erroneous idea that fumigation is disinfection. Public health officers have known for a long time that fumigation does nothing more than is implied in the word, namely, to smell up things! But they have employed it for so long that the public has been thoroughly convinced of its usefulness and it will take a corresponding long time to convince the public of its uselessness.

Fumigation is continued in many places

simply because the health officers fear the public outcry which a discontinuance of the practice would incite. It is good to see an organization like the New York Health Department discard an useless though popular weapon. Others, we hope, will follow their good example.

Now let the practice of quarantining small-pox be abandoned, too!

CANCER PARAGRAPHS.

"When a patient presents himself to his physician in a later stage; when tumor and glands have greatly enlarged, protruded, become fixed or broken down; when breast has hardened into a mass and nipple has become buried and ulceration has taken place; when the patient has become emaciated, cachectic, the time for diagnosis has become a thing of the past. The only time for diagnosis in malignancy is early in the course of the disease."

"How can this early distinction be made? Only by examining all suspected growths critically and impartially, confirming this by the microscope in the hands of a competent pathologist, and regarding all suspicious enlargements as malignant until demonstrated to be otherwise."

"However unable we are to determine the start we are safe in saying that (disregarding any theory as to the cause) when the first cells are displaced and begin to break through their limitation, then is the beginning of cancer."

"The very early stage of cancer seldom comes to the attention of the physician; that the lack of early recognition and diagnosis is usually due to his neglect is manifestly an error. The fact is that he does not see the patient early enough; it is only when the growth is sufficiently advanced that it attracts the attention of the patient, and the physician is consulted. As the patient is usually a poor diagnostician it follows that the growth is fairly well advanced before he applies for relief. There is no apparent urgency, no pain, to hasten the visit, and there is

always that hope that a trivial sore may mend, or the possible fear that it may be malignant, that keeps the patient away." (Then it's up to us to devise ways whereby patients can be persuaded to apply earlier for medical advice.—Ed.)

"In all treatment of malignancy it is essential that the case be seen early; at this stage the diagnosis is more difficult but the treatment is easier and the probability of cure much more certain. If patients were educated to the necessity of going to the physician at once as soon as any abnormal growth appears, as they do when they suspect that a pain in the abdomen may mean appendicitis, then, and not till then, will the terrible mortality of malignancy be reduced. The fatal habit of procrastination in this disease is quite as unjustifiable as is the same habit in appendicitis; as the public has been educated to the one, so it must be to the other."

"The physician and the patient having eventually gotten together and the diagnosis having been made, the physician's duty is clear; an early and a radical operation is the only thing to be considered. Palliatives, ointments, pastes, etc., should not be trifled with. Early eradication is possible, while late cure is improbable. Let the operation include the apparently sound tissue considerably removed from the growth; all suspected tissue and neighboring glands where a possibility of infection exists, should be removed. Nothing less radical will be justified when it is remembered how often recurrence takes place after apparently ideal operations."

"It is a serious question as to how many early lesions become malignant, and as to what class of lesions are apt to become so. Nearly twenty years ago, when Dr. W. W. Keen announced his observation that pigmented moles at times degenerated into cancers, he revolutionized the consideration of early growths. Today this view cannot only be confirmed, but it is safe to say that not only moles but a variety of other growths as well, such as nevi, warts and keratoses, are likely to take on malignancy. Especially is this so when they are so situated that they

may become irritated, or are persistently kept irritated for a length of time; this irritation acts as an impetus, like the balanced stone on the hillside waiting for some slight push to send it down, destroying everything in its path. So the innocent growth may remain latent for years, only waiting for a little irritation, blow or other impulse to have it take on activity."—LONGENECKER.

"The operative surgery of cancer of the lip is the brightest chapter in the history of malignant disease; 80 per cent at least ought to be cured by operation even though there be a reasonable amount of lymphatic involvement. This statement is made on the authority of Butlin, and I think that it is really too conservative, as more than that number should be saved."

"Cancer of the tongue has a precancerous stage. It is therefore the duty of anyone, when consulted by a patient with a limited leukoplakia which does not yield to treatment, or with syphilitic lesions which have left cicatrices, to advise a prompt operation which will nearly always, of course, prevent trouble."

"As to cancer of the breast, I am going to point out what I think have been some of the errors made. In the first place nearly all physicians depend upon two signs in cancer, which frequently, even in advanced cases, are not present at all. One is pain and the other is retraction of the nipple. Pain is almost invariably absent for the first year or more of cancer of the breast. I do not know of any condition about the breast that is as painless as cancer. Benign growths, cysts, and involution mastitis, all give more or less pain. Cancer gives none. Retraction of the nipple, at the very most, occurs in 51 per cent of all cases. In other words, it is due to pulling on the trabeculae of the areola and can occur only in those tumors situated centrally, which pull upon and depress the nipple. As a sign it is not without value, but its value is only relative, for not only will it be absent in practically one-half of the cases of cancer, but it is present in benign tumors, congenital deformities, involution mastitis, etc., in at least

6 per cent of all breast cases. So one may be misled by the absence of retraction in malignant disease and the presence of retraction in perfectly benign or inflammatory conditions."

"I have rarely seen cancer affect the tip of the tongue, and, in my judgment, ulcers here situated are very generally tubercular. I have occasionally, but rarely, seen it affect the dorsum."

"If a tumor exists at the cardia, or that end of the stomach, gastroscopy may at once reveal its presence. Those who have done most with gastroscopy recognize its limitations and admit that little can be accomplished in locating cancer of the pylorus, yet it is here that we have, 80 per cent of our cancers."

"Cancer of the stomach is without pain as a rule and the symptoms are so mild that the only way in which an approximate diagnosis can be made, in many cases, is by exploratory laparotomy; therefore, years ago, I insisted that in a man past forty, who has been losing weight and has gastric symptoms, which do not yield in a reasonable time under medical treatment, the only thing to do is to resort promptly to laparotomy, and even then one may fail to recognize the nature of the lesion."—RODMAN.

"In conclusion, I wish to state that at the present time the principal weapon in the struggle against cancer still consists in the thorough extirpation of the tumor."

"Whether or not cancer is a parasitic disease can neither be affirmed nor absolutely denied at the present time, but I believe that on the whole the increase in our knowledge in recent years has not tended in the direction of the parasitic hypothesis. All attempts actually to demonstrate the presence of a micro-organism have failed so far. But certain indirect evidence exists. In the first place, in restricted parts of certain towns, in certain villages or even in certain houses, the relative number of cancer cases was found much increased. The value of this apparent

evidence in favor of infection is markedly diminished by the fact that the character of the tumor in these cases varied and that in certain cases hereditary influences could not be excluded."

"As to preventive measures, the only advice to be given is that long-continued irritation of any kind be avoided as much as possible."—LOEB.

"Ulcer is the great soil upon which cancer is engrafted. When ulcer is latent, cancer may develop and no sign be given until such wide destruction and infection are present that surgery is worse than useless."

"Failure in the surgery of mammary carcinoma is in direct ratio to the percentage occurrence of classical signs. The inverted nipple, dimpled skin, stony tumor and the enlarged lymph nodes are of little practical diagnostic value. Too often they merely sound the knell of impending death."

"It is estimated that 30,000 will die during the present year in this country from cancer of the stomach. Each death is mute testimony of our limitations in diagnosis, and not of the power of surgery to cure when applied at the opportune time." ("Limitations in diagnosis" includes carelessness.—Ed.)

"The diagnosis of gallstones is met with considerable satisfaction. That of peptic ulcer is perhaps less clearly defined, but is rapidly approaching a degree of certainty. Both in gallstones and in ulcer, ignorance, neglect or willful delay find some excuse because the consequences are not so plainly demonstrable, and delay is not so often fatal. The diagnosis of cancer of the stomach is extremely difficult to make in that early stage when surgery, the only means of relief, offers a hope of cure, and when delay is fatal. Ignorance on the part of the physician is unpardonable; neglect, almost criminal. The physician's position is harassing; the patient's, perilous. Though late in his diagnosis, either because of insuperable circumstances, lack of knowledge or unpardonable neglect, the internist has met his responsibility, at least in a small

measure, when he places his patient with gallstones, ulcer, or suspected gastric cancer in the hands of a competent surgeon, but the surgeon's responsibility does not cease with exploration or gastro-enterostomy alone, because careful resection is necessary when we are in the presence of cancer or any suspicious ulcerous lesion."—GRAHAM.

"In view of the fact that some of the most powerful energies of medical science are at the present time being exerted in investigating the nature, origin, and incidence of cancer, the importance of accurate and definite statistics upon the subject becomes of absolute necessity."—DIXON.

(Give definite causes in your death certificates.—Ed.)

"It is obvious either that the elementary facts concerning cancer are little known or that they are viewed with almost criminal disregard by doctors. In many cases, and it seems especially true of cancer of the breast, the fault lies with the patient whose fate is sealed while she waits an increase in size of the lump or other supposed insistent indication for medical advice."

"Our present resources are exhausted. Minor refinements of operative technic are all that can be hoped for in the advance of surgical treatment of malignant neoplasms. The crux of the situation is early recognition and immediate treatment. How are we to bring about earlier recognition of malignant tumors? How can we impress the laity with the necessity of immediate operation? The one advance of moment in our knowledge of tumor genesis is the recognition of malignant degeneration of diseased tissues, benign in their incipency, but with a decided tendency to early transformation."

"All types of benign tumors, constant irritation from whatever cause, are proven causes of malignant tumors. These facts make it important that all such sources of irritation should be removed or at least kept under observation for any change that may denote the incipency of malignant changes. This is the chief hope today for reducing the

mortality from cancer. There are but two sources of delay in putting this principle into action; namely, first, that due to the patient, secondly, that due to the physician. Every death from carcinoma cannot be attributed to delay on the part of the family physician, but there is unfortunately a large number of suspicious cases kept under observation until advanced beyond hope of operative cure."—DEAVER.

"The cure of cancer remains the perpetual enigma of surgery. With each succeeding report of vital statistics the importance of the problem increases, for there is an alarming and progressive increase in the number of deaths from malignant tumors. The cancer death rate in Philadelphia has increased from 41.3 per 100,000 of population in 1872 to 86.3 in 1912. Incessant research has failed of positive results commensurate with those obtained in many other diseases, and although we have been enabled to formulate principles of operative treatment in the vast majority of cases we fail in their timely application."

"Those cancers of the skin which show little or no tendency to involve adjacent lymph nodes, and which show only slight malignant tendencies, are usually curable. These conditions, especially when involving the face, are best treated with the X-rays. The results are sometimes remarkable."

"Until we have discovered a specific cure for malignant disease it is our duty to educate both the laity and the medical profession in the few underlying first principles that alone insure success with the modern methods of operative treatment."

"The prognosis of the vast majority of cancers depends primarily upon the possibility of complete excision of every vestige of the disease. From this standpoint, therefore, internal cancer presents difficulties of treatment, purely mechanical in nature, that at once afford a small measure of hope in comparison with the external or superficial cancers."

"Improvement can only come through the

medium of the family physician, and lay education. Until there is a thorough understanding among doctors that every lump in the breast of every person, male or female, young or old, is a cancer in the making and should be immediately removed, we need not expect any improvement in the final operative results of mammary cancer."—DEAVER.

"There is no doubt that the public is aroused by the publication of excellent articles written in a popular vein in several of the magazines and newspapers. It is equally true that the medical student of today is being constantly impressed with the importance of early diagnosis and treatment, but unfortunately the busy practitioner does not find time to study his patient carefully and too often he prescribes without making a careful examination. Then when the ravages of the disease have made great inroads on the patient's health, the diagnosis is made too late to save the patient."

"The importance of early diagnosis of cervical cancer is so urgent that, when called upon to treat a lesion of the cervix, carcinoma should always be thought of first and excluded from the diagnosis. The signs and symptoms of cancer of the cervix are so few that a hurried and superficial examination of any suspicious condition should never be made. If there is the slightest doubt, the diagnosis should be reserved and the patient kept under careful observation. Too often we are told by the patient that an examination had been made by her physician, but the condition was treated lightly and repeated examination was not insisted upon."

"While the causes of uterine bleeding and discharge are many and often of a transient nature, we will state with all positive emphasis, that any irregular bleeding or suspicious discharge should never be treated under any circumstances without making a careful digital examination. If examination be refused by the patient, the attending physician should refuse to prescribe and bluntly tell the patient the danger of the indiscriminate drugging and douching."

"Any ulcer-like lesion of the cervix that does not respond to cleanliness and ordinary applications within a reasonable time, should be referred to an expert for diagnosis. Prolonged local treatments have been responsible for many deaths from cancer and the delay is often due to the unwillingness of the attending physician to ask for consultation, or to his unshaken belief in the efficacy of the time-honored and much abused local treatments."—WEISS.

KNOWN AND NOT KNOWN ABOUT OUR COUNTY SOCIETIES.

(Continued from Last Issue.)

Bradley county: This county is not organized. We include it in this "report" simply because one of the physicians in the county was "live" enough to attend the state meeting at Nashville. Though not registered, Dr. Speck, of Cleveland, was in attendance. Bradley county had an organization until 1913. There are 24 physicians in the county, but, we think, if refusal to reply to our letters means anything much, that none of them can write or that the supply of stationery is exhausted in that neck of the woods. Bradley county can maintain a good society if the doctors want to. We take it that they do not want to.

Campbell county: Members reported for 1915, 13; 1914, 19. Registered at Nashville meeting, 1. Distance from Nashville, about 225 miles. Reports to Journal of regular meetings, none. Meetings held on, don't know. Average attendance, don't know. Yearly program, don't know. Number of physicians in county, 45. Members from adjacent unorganized counties, none; members paid medical defense assessment, don't know. Educational work, none reported. President, L. M. Scott. Secretary, F. A. McClintock.

Campbell county has not only a relatively large number of physicians who are not members of the county society, but there are several who are members of the Kentucky State Medical Association. We are not informed as to just why this condition exists. In fact, we have very little information about Campbell county except what we have been able to dig up ourselves. We know that there are

a number of splendid men in the county who are thoroughly competent to make the society worth while. We do not believe that Kentucky has any real right to have members from Campbell county, Tennessee. The failure of some of the largest mining and manufacturing enterprises has hit Campbell county a hard blow. It is probable that the loss of membership is explainable on this basis. Dr. McClintock is going to write us before long and tell us all about Campbell county.

Cumberland county: Members reported for 1915, 5; 1914, 5. Registered at Nashville meeting, 3. Distance from Nashville, 130 miles. Reports to Journal of regular meetings, none. Meetings held on, don't know, at ———. Average attendance, don't know. Yearly program, don't know. Number of physicians in county, 6. Members from adjacent unorganized counties, none. It would be very difficult for physicians living in unorganized counties adjacent to Cumberland to attend meetings. Members paid medical defense assessment, 5. Educational work, none reported.

President, W. A. Reed; Secretary, V. L. Lewis.

The Cumberland County Medical Society is composed of five live men. We are informed that there is another doctor in the county, but do not know why he is not affiliated. It is hard for so small a number to maintain an active medical society, but Cumberland "sticks." We call attention to the fact that three of the five members were at the Nashville meeting, and to the further fact that Cumberland is always represented at meetings of medical associations held anywhere within reach. Another thing—Cumberland reports right on time every year.

Crockett county: Members reported for 1915, 12; 1914, 9. Registered at Nashville meeting, 2. Distance from Nashville, 185 miles. Reports to Journal of regular meetings, have had one or two. Meetings held on, don't know, at ———. Average attendance, don't know. Yearly program, don't know. Number of physicians in county, 27. Members from adjacent unorganized counties, all adjacent counties organized. Educational work, none reported.

President, W. H. Cook; Secretary, E. S. Hopper.

If Crockett county doctors help one another like they help the writer when he has called upon them for help, they have the best society in the world. If they don't, their society needs something. This county reports two more members for 1915 than were enrolled last year, but there are, if our information is correct, more men in the county not affiliated than are members of the society. Dr. Hopper gave splendid service as secretary in 1914, and we hope his effort will be directed toward making an even better record for 1915.

Cocke county: If there is any organization in Cocke county, the members are trying to hide it from us. But we see things in all sorts of places, and not long ago we saw a newspaper published at Newport which was very handsomely illustrated. Among the most notable illustrations were the photographs of a number of doctors, some good looking and some better looking. After easing our eyes a little, we looked over the printed columns of the paper and then we went and looked at our books. Sad to say, there were several points of difference between the newspaper statement and our records. Whereas the newspaper account made it appear that the physicians of Cocke county were the leaders of organized medicine in Tennessee, and some of them pumpkins of considerable rotundity and ponderosity in the world of medicine at large, our books showed the cold and cruel fact that two men from Cocke county were reported as paid members of the Tennessee State Medical Society for 1914. Even those two have not been heard from for this year. We did what we thought was our simple duty and wrote immediately to the doctors of Cocke who made such a fine newspaper showing, intimating that if they would send us \$2.00 apiece and their autographs that we would not ask for their photographs and that we would try to make our books conform to the statements of the "Boosters Gazette." Up to this good time we have not seen the color of any Cocke county money, nor have the forty lines on the page set aside in our roll book for this county had any inscriptions in-

serted between them. We really think that a crowd of doctors who can make such a fine pictorial display in a newspaper should certainly have ingenuity enough to maintain a very lively county society. Doctors are thick enough in this county to be stirred with a stick and there are some splendid men among them. There is no good reason that we know of why they are not in the State Association. We have a large and enthusiastic chromo which we will bestow with pleasure upon any individual who can conjure a reply to a letter from any doctor in Cocke county.

Chester county: Members reported for 1915, 12; 1914, 11. Registered at Nashville meeting, 1. Distance from Nashville, 170 miles. Reports to Journal of regular meetings, have had one or two. Meetings held on ——— at ———. Average attendance, don't know. Yearly program, don't know. Number of physicians in county, we know of eleven. Members from adjacent unorganized counties, one. Members paid medical defense assessment, don't know. Educational work, none reported.

President, J. R. Carroll; Secretary, W. C. Brown.

In 1914 Chester county was one county from which we could always expect replies to our letters. The secretary never lost any time in forwarding any information asked for. The society has a new secretary this year, but he threatens to be on the job as was his predecessor. Chester is one of the small counties of the state, but its doctors take a broad view of things. We were somewhat surprised that only one member from this society registered at Nashville, but expect to report at Knoxville next April that Chester county has had a fine society year. We know they have a good president, a good secretary and a good ex-secretary—it's up to the other members.

Carroll county: Members reported for 1915, 23; 1914, 20. Registered at Nashville meeting, 4. Distance from Nashville, 105 miles. Reports to Journal of regular meetings, none. Meetings held on ——— at ———. Average attendance, don't know. Yearly program, don't know. Number of physicians in county, 43. Members from ad-

jacent unorganized counties. —. Members paid medical defense assessment, 17, we think. Educational work, none reported, but we happen to know that the society has done something in this direction.

President, —————; Secretary, B. W. Dodds.

Carroll county has the honor of having as a member of the county medical society the most progressive man of his age in the whole medical profession, Dr. Jos. T. McCall. Though more than eighty years old, Dr. McCall still finds pleasure in the study of anatomy and other fundamental branches as well as in keeping up with the progress of modern medicine. He goes each year to Tulane University for post-graduate work. If other members of the Carroll County Medical Society do not profit by the example of this veteran member, something is wrong with them. Carroll county should have one of the best societies in the country. Eighteen of the twenty-one members live at railroad points. We miss the names of seven men from the 1915 roll which were on in 1914. One other name that is gone is that of Dr. W. G. Compton, who died in 1914. The 1915 membership is one more than in 1914, so about as many new men have come in as have been lost. But why not have the old ones back? It's fine to get new members, but bad to lose old ones. Dr. Dodds is a fine secretary, but not overly communicative. Still, we are going to reserve a space in "Society Proceedings" for Carroll county in this volume of the Journal.

(To Be Continued.)

GOV. RYE MAKES APPOINTMENTS.

Governor Tom C. Rye announced on June 15 the appointment of Dr. W. J. Miller, Johnson City, to membership on the Tennessee State Board of Health. Dr. Miller succeeds Dr. A. J. Gamble, Maryville, whose term had expired. He is a well known physician of Johnson City, and is a brother of Dr. S. R. Miller, of Knoxville. The Journal extends good wishes for Dr. Miller's success in his new assignment and hopes that he will be able to contribute largely to the promotion of the public health interests of the state.

Another new member of the Board of

Health is the recently appointed Commissioner of Agriculture, Mr. Bryson, of Marshall county, who succeeds Capt. T. F. Peck. Under Capt. Peck's administration there was very close co-operation between the Departments of Health and of Agriculture. Commissioner Bryson is known as a man who is thoroughly progressive and sincerely interested in advancing every interest of the rural population of the state, none of which can be of greater importance than health. It is fortunate that there is opportunity for such active and helpful co-operation between these two important departments—Health and Agriculture—and extremely fortunate that the new Commissioner of Agriculture, like his predecessor, is a man who understands and appreciates the need for health conservation through work for the prevention of disease.

The personnel of the State Board of Health as now organized is Dr. R. E. Fort, President; Dr. A. V. Biggs, Martin; Dr. W. J. Miller, Johnson City, and Hon. J. Knox Bryson, Commissioner of Agriculture, ex officio.

SOME TRAINING!

We once saw the letterhead of a city restaurant on which was advertised the fame and fitness of the cook of the establishment—more properly designated the **chef**. It was stated that the genius who presided over the culinary laboratory of this particular restaurant had served in kitchens of high and mighty persons, some of them royal persons. The length of service in these distinguished places was not stated, neither was the character of service described, nor were the reasons for discontinuance set forth. We pondered and wondered—wondered if the cook had served as long as a week or a year; if he had been floor scrubber, slop carrier, or had he really been cook; and wondered why the kings, queens and less distinguished dignitaries had been content to let him go far across the seas and accept service in a restaurant in a fourth class city. We wondered if the letterhead bearing statement of his former regal connection brought any wonderful increase of patronage to this restaurant. We bet ourselves a sandwich and a cup of coffee

that it did not and that the rest of the public wondered about the **chef** just as we.

We have lately seen a doctor's letterhead which has started up in our little mind the same process of pondering and wondering. The gentleman who uses the stationery referred to lives in a town of about 2,500 and is probably a fluent letter writer. The letterhead calls attention to the fact, significant or insignificant, according to viewpoint, that this distinguished physician "Received Training"—in capital letters—at "Grandview," "Good Shepherd," "Many Service," and "St. Somebody's" hospitals, all of which are said by the letterhead to be located in a metropolitan city. The names of the hospitals as here given are our own names.

We have thought of the doctor as we thought of the **chef**. What "training" did he get? Was it a course in ambulance driving, or did he receive instruction in removing debris from the operating room? Did he look 'em over from a perch in the amphitheatre, or was he really allowed to hold the retractors once or twice? How long was he "trained" at each hospital? If he had a week or two at each, he should go back; if he had a year at each, he should be a crackerjack and should so advertise, if advertise he must. Why did he "train" at so many hospitals? Just one is enough for the average man. This fellow must be far above the average or hard to please. How in the world have these hospitals survived his withdrawal from "training"?

Finally, does such "bunk" on doctors' letterheads make for advancement of interests of the medical profession? We ponder and pause for reply, confident that most real doctors have ideas about this thing which closely coincide with our own.

PREACHING PREVENTION IN MEMPHIS.

On Sunday, June 20, the pulpits of Memphis churches—white and black—were occupied by physicians who gave the congregations helpful information concerning the prevention of malaria. Assignments to the various churches were made by the City Health Officer, Dr. J. L. Andrews, who is efficiently directing the Memphis Department of Health.

Closely associated with Dr. Andrews in perfecting plans for "Malaria Sunday" were Drs. Krauss and Cummins and Senior Surgeon Jos. H. White of the U. S. P. H. Service. The doctors of the city responded in a most splendid manner and as a result of their efforts to instruct the citizens of their community in an important phase of health conservation Memphis is a better city to live in than it has been heretofore.

Not only Memphis but West Tennessee, Mississippi and Arkansas will be benefited by the anti-malaria campaign of the Memphis doctors. The papers of Memphis, wide awake and keenly alive to the importance of health conservation, gave wide publicity to this movement.

We congratulate the Memphis physicians and commend their example as worthy of emulation by others.

TALK AND PROMISES.

They are often synonymous. The fellow who said that "Talk is cheap" must have delivered himself of this truth after attendance upon the meeting of some state medical society. The gentleman who casually remarked that "Hell is paved with promises"—we know he said "good intentions," but that don't fit here—would never have thought of hell in this connection had he been present at the last annual meeting of our State Medical Association. Rather would he have immortalized his statement about abundant promises by referring to those of our members who were loud in acclaiming their firm intention to contribute freely to the fund for prosecuting notorious quacks in Tennessee.

Up to the good day when this is written \$114.93 have been contributed to this fund. Six men in Davidson county gave \$40 of the above sum, two members of Hamilton county gave \$11 of it, the Robertson County Medical Society gave \$10 of it, three Knox county members gave \$10 of it, the White County Medical Society gave \$6 of it, two Shelby county members gave \$6.93 of it, and the rest of it was contributed by twenty-four members in various counties. So, it is seen, six-

teen of the forty-one contributions made up most of the total and two of these were in "lumps" from county societies.

Incidentally we would remark that when Roane county called for needed help the fund was all but wiped out. There's about \$15 of it left.

Now! If you meant what you said when you voluntarily promised \$5 or more, send it in. If you didn't mean what you said when you made the promise, we hope the fiver will burn a hole in your pocket, blister your hide, and then get away from you.

Those who made no promises but who are disposed to help a good cause may send what they please. Any amount will help.

A REAL DRUG STORE.

Our so-called "pharmacies" have degenerated into shops where the cigar stands and soda water fountains are the leading features with "lantac" and "vilatas" for second lines, and with prescription departments which are maintained just as a habit. Anybody who can tell a "twofer" from a sure-enough cigar, who can dip ice cream out of a freezer into a glass which has been temporarily submerged into a trough of more or less scummy water, and who can persuade a somewhat disordered customer to try "tanlac" instead of some other fake nostrum which is sold with less profit can fill the bill in a modern "pharmacy."

The Nashville Surgical Supply Company has added a real drug and prescription department to their business. This new department will be presided over by a real pharmacist. Physicians' prescriptions will be filled and standard drugs will be sold. **No patent medicines will be carried and no counter prescribing will be done.**

Here is an establishment that deserves the support of our physicians. If they are sincere in their complaints against the "rexalls" and the "tanlacs," let them write original prescriptions and send them to a real drug store to be filled; let them buy their needed supplies from a concern that does a clean business; let them encourage in every way a real pharmacy run by real pharmacists.

News Notes and Comment

Don't fumigate—scrub! Then keep it scrubbed.

Dr. J. L. Crook and Mrs. Crook, of Jackson, went to the A. M. A. at San Francisco.

Drs. J. A. Witherspoon and Jack Witherspoon were at the San Francisco A. M. A. meeting.

A doctor who fails to report cases of communicable disease is unfair to his profession and unjust to his community.

Have you noticed how many can show up at a banquet who never attend society meetings? Look 'em over next time you go to a free feed.

Dr. Herschel Ezell, Nashville, is now occupying new offices at 1113-14 Independent Life Building, formerly the First National Bank Building.

Dr. Harlin Tucker has returned to Nashville after two years hospital work in New York, and will be associated in practice with his father, Dr. R. O. Tucker.

Dr. J. E. Smith has removed from Livingston to a new location near Brush Creek, in Smith county. His new address is Route No. 2, Brush Creek, Tennessee.

Dr. W. H. Witt, of Nashville, attended the meeting of the A. M. A. at San Francisco, and, with Mrs. Witt, made an extensive sight-seeing trip in the great Northwest.

Flies, bed-bugs, mosquitos and other many-footed insects may be and are disease carriers, but it is important to know and to remember that the worst of all the carriers is a biped—man.

Dr. E. C. Ellett, President of the Tennessee State Medical Association, attended the meeting of the A. M. A. at San Francisco.

Dr. Ellett was Chairman of the Section on Ophthalmology.

Senior Surgeon Jos. H. White, U. S. P. H. Service, Memphis, conducted a course of instruction in Hygiene and Sanitation at the University of Tennessee Summer School for Teachers in Knoxville.

July is a fine month for cleaning the office stove and for emptying the quid box so often found in offices. It's also a fine month in which to resolve that the stove shall be kept polished and the quid box abolished.

Dr. and Mrs. Perry Bromberg, of Nashville, spent part of the month of June visiting relatives in Texas and then went to the A. M. A. Dr. Bromberg was the Senior Delegate from the Tennessee State Medical Association.

One of the most ridiculous sights in the world is to see a **doctor** solemnly igniting a sulphur torch in an open room in which he has treated a case of communicable disease, after having assured those living in the house that the gases generated by oxidation of the sulphur will disinfect the room.

The cause of cancer has not been found. All methods of treatment have failed to a large extent. You may believe that no cancer should be operated upon once its identity is established. None of these will excuse you for failing to make a careful examination in every case where cancer, present or possible of development, can be thought of as a possibility.

Dr. L. E. Trent, of Erwin, has received appointment as Assistant to the Superintendent of the Iowa State Hospital for the Insane at Mt. Pleasant, Ia. Dr. Trent has been an active member of the Unicoi County Medical Society. He will transfer his membership from Tennessee to Iowa upon assuming his new work on July 1st.

Dr. John E. Hall, formerly of Philipp, Mississippi, and Dr. James D. Cochran, former-

ly of Fayetteville, North Carolina, have located in Nashville. Doctors Hall and Cochran have been pursuing hospital work in New York for several months. They will occupy offices in the Independent Life Building and will limit their work to genito-urinary diseases.

"Doctor, I don't see your name on the membership list of your county society. Why is it not there?" "Well, I have thought about joining for some time." "Has any member of the society asked you to join?" "No, sir, never." This conversation has taken place in the Journal office twice within a week. Both of the non-members were well prepared and ethical physicians. Ask them—**You**—ask them to come in.

Sears, Roebuck & Co., one of the largest mail order houses in the world, have left patent medicines out of their merchandise catalogue. The reasons assigned for this action by this great commercial organization are as follows: (1) That valueless and even dangerous medicines are advertised to deceive the well and to fool the sick. (2) That patent medicines are disappointing, if not dangerous, in view of the fact that it is often difficult and always important to find the underlying cause of disease, and that the patient is the person least able to form safe judgment. (3) The person who falls victim to false or misleading advertisement is at least defrauded. (4) The person who depends on an advertised nostrum to cure a serious ailment is losing valuable time.

Good! Even Wine of Cardui will finally "lose out."

Correspondence

ONE FROM REAGOR.

Well, West, you have "smoked me out" again and here comes a report of our last meeting of the Bedford County Society. Now under "Known and Not Known About Our County Societies," some things you say you don't know about Bedford County Society you *could* know if you will but take time to

look up the records. "Average attendance" you don't know. Look at report which I as Councilor for Fifth District sent and was reported to the House of Delegates. "Members paid medical defense assessment, don't know." Look at report sent to the Medical Defense Committee on Jan. 15, 1915, and you will find 13 paid. On Feb. 5th and March 31st, respectively, you will find two more, making in all 15 of Bedford's members paid medical defense and reported as such by the **Secretary of Bedford County Society**, who is not responsible for your not knowing about this if you will not look and know. Ha! ha! Now what say you about my fountain pen? It leaks, but it sometimes makes records which could be looked up if the time was to be had to do so.

F. B. REAGOR.

Fine and dandy! We have never seen any report to the Medical Defense Committee, but will soon have from the Chairman a full list of all who have paid. We find an attendance of 12 for 1914 reported by Dr. Reagor as Councilor, but 1914 is dead and gone. Thank you, Dr. Reagor, thank you!

Society Proceedings

HENDERSON COUNTY.

For four years the Henderson County Medical Society has been doing splendid work. For three years of this time not once has the regular meeting of the society gone by default. This is a fine record in view of the fact that Henderson county has no pikes and the mud gets thick and deep in the winter months. It goes to show that when the physicians of a county are alive to the benefits of organization they will maintain organization and gather the benefits.

One reason for the success of the Henderson County Society lies in the fact that the members recognize the value of keeping alive a feeling of good spirit from a social standpoint. Each year they take a day off and have an "outing." They all go if there's any way to get there and they always ask some of their many friends from other counties to come and enjoy the day with them.

This year the annual outing was at Hinson Springs and nearly all the members were on hand. Visitors were present from Hardin, Decatur, Carroll, Madison, Shelby and Davidson counties. After some hours spent in handshaking and social conversation, a repast of "barbecue and trimmin's" was enjoyed, and then several talks on subjects of interest to doctors were heard.

There can be no doubt that an occasional getting together for a day of social enjoyment is a splendid thing for the members of a society.

BEDFORD COUNTY.

Bedford County Medical Society met in regular session June 17, 1915. As both the President and Vice President were absent, Dr. T. H. Woods was called to the chair and called the meeting to order. The roll call showed the following members present: Drs. Haggard, Shelton, Ray, Coble, C. W. Moody, Orr, Burdette, Patton, Woods and Reagor. The minutes of the previous meeting were read and adopted. A small voluntary contribution was made by most of those present for the Roane County Medical Society to help to prosecute the negro "yerb" doctor. Dr. E. W. Patton read a paper on "Dysentery," which was discussed by most all present. Dr. W. M. Orr read also a paper on the subject of "Rheumatism," which elicited a good discussion, after which the society adjourned to the next meeting in July.

F. B. REAGOR, Secretary.

MACON COUNTY.

The Macon County Medical Society met in Dr. P. East's office at Lafayette, Saturday, June 12, at 10:30 a. m., with Dr. H. C. Smith, President, in the chair. Drs. East, Allen, Hames, Carman, Tucker, Webb, Kirby and Freeman of the society were present. Visitors present were Dr. T. B. Yancey of the State Board of Health, Dr. Bud Alexander of Smith county, Dr. Beasley of Dixon Springs, Dr. F. M. Blankenship of Hartsville, Drs. W. A. and O. N. Bryan of Nashville.

At 11 a. m., Dr. Allen read a very interesting paper on "Summer Diarrhea In Children." Discussed by the society.

At 12 m. the society adjourned for dinner and all went in a body to the Woodmore Hotel, the best place in the town or county, to get something good to eat. We found a table loaded with all the good things that could be thought of. This was a most enjoyable feature of the meeting.

At 1 o'clock p. m. we met in an open meeting in the court house to hear Drs. Bryan read their papers. They were very interesting and instructive papers, indeed. The Macon County Medical Society desires to thank Drs. Bryan for their visit, also for the two interesting papers read for us. We feel it will help us along the dark way, and we will be glad to have them come again. We also appreciated the presence of the other visitors. Brethren from the adjoining counties, come again, boys, we like to see you.

Dr. F. M. Blankenship of Hartsville did a tonsillectomy for us while at the meeting. We are hopeful that our society will take on new zeal from this the best meeting in the history of the society.

J. Y. FREEMAN, Secretary.

MCNAIRY COUNTY.

The McNairy County Medical Society met in the office of Drs. Smith and Smith, Thursday, June 17, 1915. In the absence of the President, Dr. C. D. Chambers, the Vice President, Dr. Bell, presided. Those present were Drs. Abernathy, Bell, Boatman, Sanders, Hodges, Tucker, J. R. Smith, J. L. Smith, E. M. Smith, Dody and Jackson. The minutes of last meeting were read and approved.

When clinical cases were called, Dr. J. R. Smith presented a case of curvature of spine, a baby three years old, diagnosed Pott's disease. This case was freely discussed by all members present.

Dr. Sanders reported a case with diagnosis of gonorrhea of rectum, which elicited quite a lively discussion.

Dr. Doty read an interesting paper on "Hydrophobia and Its Preventive Treatment." Discussed by Drs. Hodges and Sanders.

Dr. J. R. Smith read a paper on "Typhoid Fever, Its Cause and Diagnosis."

Program for July meeting: Dr. Hodges,

"Pott's Disease;" Dr. Abernathy, "Tetanus;" Dr. J. R. Smith, "Treatment of Typhoid Fever."

T. G. JACKSON, Sec'y & Treas.

DR. JAMES N. BRIDGES.

Dr. James N. Bridges, aged 79 years, died at his home at New Middleton, Tennessee, on June 11, 1915. Dr. Bridges began the practice of medicine in 1854 and continued in this service until his death—a record of sixty-one years in active medical practice. He was surgeon in the Confederate army during the war of '61. His medical studies during young manhood were pursued at the University of Nashville and he received license from the state in 1888 under the law which was enacted about that time. For twenty-five years Dr. Bridges practiced in Rutherford county and then removed to Smith county, where he resided at the time of his death. He was buried at his old home in Rutherford county. Dr. Bridges was regarded by those who knew him as a man of ability in his profession and of integrity and worth in his community.

B. J. HIGH.

ROBERTSON COUNTY.

The June meeting of the Robertson County Medical Society was held in Salem Church, Sadlersville, Tuesday, June 22, 1915. The meeting was called to order at 10:45 a. m. by President Henry and opened with prayer by Rev. Smotherman. The following named members were present: Henry, Fyke, Moore, Johnson, Winters, Robertson, Connell, M. L., and Dye, with visitors as follows: Drs. Sory, L. F. Bradley, and Fort, Fuqua, Nicholl, Shoulders, King, Howard, Kennon, Nashville, Tenn., and Drs. Tyler, Robinson and Frey, of Guthrie, Kentucky.

Hon. Joel B. Fort delivered an address of welcome on the part of the local physicians and the laity, to which Dr. Fyke responded on the part of the society. Dr. Shoulders responded on the part of the visiting physicians.

Clinical cases were reported by Drs. Fort, King, Nicholl, Kennon, Sory and Winters.

Adjourned for dinner.

By request this was a time when a picnic

dinner was to be given, and Dr. Dye and his friends had the "picnic dinner," enough for all and to spare. This feature of the program was enjoyed by all.

Reconvened at 2 p. m., when Dr. Fyke delivered an address on "Pellagra," which was freely discussed. Dr. Johnson read a paper on "Eczema Erythematosum," which was discussed by Dr. King. By request Dr. Fort read a paper on "Exophthalmic Goiter," and Dr. King read a paper on "Uses and Abuses of Arsenic."

Drs. Moore, Mathews and Odom were appointed directors for the July meeting, and Greenbrier chosen as the place of meeting. A rising vote of thanks was given Dr. Dye and his friends for their hospitality of the day.

B. F. FYKE, Secretary-Treasurer.

CARROLL COUNTY.

The Carroll County Medical Society met in McKenzie with the following members present: Drs. E. W. Hillman, G. C. Bryant, H. T. Collier, W. M. Wright, J. D. Todd, O. A. Todd, A. I. Dennison, J. B. Cox, J. J. Lancaster, E. H. Martin, G. L. McDaniel, L. L. Duncan, A. C. Elinor, B. C. Dodds, S. L. Mackey.

Following is the program given: "County Medical Societies," Dr. A. I. Dennison; "Chronic Interstitial Nephritis," Dr. G. L. McDaniel; "Ptomaine Poison," Dr. L. L. Duncan. These papers were splendid and were freely discussed.

This was by far the best meeting of the year. The local physicians entertained the society in a most enjoyable manner. The next meeting will be held in Huntingdon, July 27. A great meeting is expected.

B. C. DODDS, Secretary.

NASHVILLE ACADEMY OF MEDICINE.

March 16th.—The President, Dr. W. E. Hibbett, called the regular weekly meeting of the Academy to order at 8:20 p. m. The following members were present: Bromberg, Dunklin, Billington, Hill, Leonard, Morrison, Simons, Campbell, D. Eve, Sr., Pickens, Bloomstein, Spitz, Edward, L. Caldwell, Harris, J. Witherspoon, Witt, Manier, D. Eve, Jr.,

Orr, Dixon, Tigert, McCabe, Litterer, Fuqua, Nichol, R. A. Barr, H. King, C. F. Anderson, H. Barr, Thach, Pollard, Grizzard, Morrissey, Oughterson, and Aycock.

Drs. McCabe and Tigert of the Legislative Committee of the Academy acquainted the members with the status of the medical practice act, saying that it was being opposed by the Shelby County Medical Society. Dr. Bromberg moved that a committee be appointed to write or wire the Shelby County Medical Society the merits of the present bill. Dr. Tigert explained that this had already been done. Dr. Duncan Eve, Sr., moved, seconded by Dr. R. A. Barr, that this matter referred to in Dr. Bromberg's motion be delegated to the Legislative Committee. Carried.

Dr. W. L. Sneed, formerly of Nashville but now of New York City, addressed the Academy on "Some Recent Advances in Orthopedic Surgery." There was no discussion.

Case reports were called for and Dr. Pollard exhibited a specimen of a ruptured ectopic pregnancy of the third month.

Dr. Duncan Eve, Jr., reported a case of a negro girl of 16 years in which there was an absence of a vagina. A large mass was present in the pelvis, which, on operation, proved to be an enlarged uterus containing menstrual blood.

Dr. Barr exhibited a specimen of a preperitoneal dermoid removed from a woman 32 years old. He also reported a case of cancer of the rectum in a woman 72 years old in which a colostomy was done under local anesthesia. Dr. Barr reported a case of carcinoma of the pleura in a man 50 years old.

The Academy adjourned at 9:45 p. m.

March 23rd.—The regular meeting of the Academy was called to order at 8:20 p. m. by the President. Among those present were: Drs. Tigert, Burch, Litterer, Bloomstein, T. A. and N. C. Leonard, Sharber, Plunkett, Hill, L. Smith, Handly, Fuqua, O. Bryan, J. Witherspoon, D. Eve, Jr., C. F. Anderson, Aycock, Billington, Schell, McCabe, Witt, Harris, Dunklin, Friedman, McKinney, Pollard, Pickens, Orr, Spitz, Cowden, Ward, Grizzard, Kennon, Floyd, R. A. Barr, H. King, and Williamson.

The paper of the evening was by Dr. T. A. Leonard on "Dental Pathology and Its Relation to Systemic Disease." Dr. W. A. Oughterson was to open the discussion, but was absent. The Chair called on Dr. Jack Witherspoon, who said that he was particularly interested in this subject and was indebted to Dr. Leonard for presenting this subject from the dentist's standpoint.

Dr. J. W. Handly asked the essayist how he used the emetin.

Dr. Litterer discussed the etiology of pyorrhea alveolaris, stating that he did not believe the entamoeba buccalis was the sole causative agent. He does not believe that emetin or vaccines of any great good in the disease as to permanent cure.

Dr. O. Bryan condemned the use by dentists of strong antiseptics. He asked the essayist to give, in closing, some rules governing the care of the teeth.

Dr. Spitz said that in cases examined the amoeba were not present in over fifty per cent of the specimens. He does not believe that the amoeba is the causative agent in pyorrhea.

Dr. Leonard (closing) agreed that amoeba has not been definitely proven to be the causative agent and has used emetin in cases in which no benefit was observed; others, however, show great improvement. He said that his experience with vaccines has given variable results.

Under the head of case reports, Dr. Billington exhibited an X-ray plate of a case of painful heel due to a spur on the under surface of the os calcis. The spur was removed by operation.

Dr. Burch reported a case of dermoid cyst in a woman five months pregnant. Consultation advised that the woman be allowed to go to term and then removing the tumor and a Caesarian section. Dr. Burch advised immediate operation, which was done. The speaker asked which procedure was advisable.

Dr. Witt reported a case of acute spondylitis which simulated renal stone.

The Academy adjourned at 9:55.

bett, called the regular meeting of the Academy to order at 8:20 p. m. The following members were among those present: Litterer, R. Caldwell, Handly, Witt, Morrissey, N. C. Leonard, Hill, Floyd, Harris, Owsley, Tigert, Spitz, W. A. Bryan, Oughterson, O. N. Bryan, McCabe, Cowden, Pickens, Edwards, Shoulders, Dixon, Lacy, Orr, Friedman, J. Witherspoon, Williamson, Oliver, Pollard, Manier, D. Eve, Jr., Larkin Smith, McKinney, Simons, Teachout, J. M. King, B. G. Tucker, Kennon, Hugh Barr, Thach, W. B. Anderson, C. F. Anderson, Aycock and Dake.

The Legislative Committee reported that they had succeeded in getting the Medical Practice Act through the Legislature, it having passed the Senate by practically an unanimous vote. Dr. Witt moved, seconded by Dr. Cowden, that a resolution of thanks be given the committee for their great work. Carried.

Dr. Tigert moved, seconded by Dr. Oliver, that the Secretary be instructed to draw up suitable resolutions and forward same to the following members of the Legislature for their interest and work in passing the above mentioned bill: The Davidson county delegation, Senator Worley and Representatives Stewart and Hauk. Dr. Dixon added the names of Drs. Robertson and Dunklin. Carried.

The essayist of the evening was Dr. R. L. Jones on "The Chemical and Biological Tests for Syphilis." Dr. A. A. Eggstein was to open the discussion, but was absent. The Chair called on Dr. Herman Spitz. The latter said that he came to learn rather than discuss the paper and in coming learned of the multiplicity of the tests. He was disappointed in that Dr. Jones did not mention the Wasserman, since that is the one used by all in the diagnosis of syphilis. The speaker said that the cobra vanom test mentioned by the essayist is one of the best chemo-biologic tests. In regard to the test of the spinal fluid Dr. Spitz said it was interesting to watch the cell count and Wasserman of the cerebrospinal fluid decrease as the treatment progressed. The speaker described the India ink method of demonstrating the spirocheta pallida.

Dr. Litterer said that he had used the precipitin test before the Wasserman came into vogue. The speaker also said that of all the tests mentioned, while each one may be of value in certain cases, the Wasserman is most reliable. He said that he had never used the venom test.

Dr. Simons said that he had worked six months on the myostigmine test, at which time nearly all of the literature was from the Italians. He found the results not constant and gave it up. He said that the gold chloride test had held weight with the Wasserman. In regard to the Wasserman he said that cholesterinized antigen gave a more sensitive reaction and should be used to determine whether treatment should be continued.

Dr. Jack Witherspoon said that the four-phase reaction of Nonne is one of the most valuable tests in syphilis. He said that the chloride of gold reaction is popular now, but doesn't know how long it will last.

Dr. Jones (closing) said that all tests gave good results with the originators and no one else. All come back to the Wasserman. He said that he did not mention the Wasserman in his paper because the various phases of this reaction could furnish material for several valuable papers.

Under head of case reports, Dr. Handy reported a patient who had fallen from a trestle fracturing the left foot and dislocating the left ankle. The right foot showed an impaction of the astragalus into the os calcis. The fracture of the left foot was compound. X-ray plates were exhibited illustrating the case.

Dr. J. M. King reported a case of chronic urticaria in a young lady of twenty-five years which had continued for ten months. Under autogenous serum injections the patient was improving, the last dose he had given being 40 c. c. in the vein. Dr. King also exhibited an X-ray plate which demonstrated the presence of gall stones. This was verified by operation. Dr. Friedman, in discussing Dr. King's case of chronic urticaria, reported a similar case of seven years' standing cured by the intravenous injections of autogenous blood serum.

The Academy adjourned at 9:30 p. m.

May 11th.—The Academy was called to order at 8:20 p. m. by the President, Dr. W. E. Hibbett. Those present were: Hargis, Simons, Morrissey, L. Caldwell, Bloomstein, Witt, M. O. Davis, C. C. Sullivan, O. Bryan, Handly, Price, Billington, Pickens, C. F. Anderson, Williamson, R. A. Barr, Larkin Smith, Manier, Kennon, Edwards, Ward, McKinney, H. Barr, Floyd, Pollard, Bromberg, Grizzard, Sharp, Sanders, L. Bryan, H. King, Tigert, Harris, and Thach.

The minutes of the previous meeting were not read.

Dr. W. A. Oughterson read a paper on "Syphilis of the Cardio-Vascular System."

Dr. W. H. Witt, opening the discussion, said that the pathological conditions in the heart and arteries in syphilis are often overlooked; also, the fact that the pathological changes may come on in the early stages of syphilis. There is a tendency on the part of the profession, he said, to think that the changes in the heart and blood vessels and the brain come on in the tertiary stage and therefore late in the duration of the disease. He stated that it was not uncommon for the heart and large blood-vessels to be affected in the first few months of a syphilitic infection. Brooks has shown, the speaker said, that some of the serious results following large doses of salvarsan were due to syphilitic changes in the cardio-vascular system. Brooks, therefore, advocates small doses of salvarsan and a more liberal use of mercury.

Dr. Handy emphasized the last remarks of Dr. Witt in regard to the use of salvarsan in late syphilis. Dr. Handy has had some untoward results in the administration of large doses of salvarsan and has since used smaller doses.

J. F. GALLAGHER, Secretary.

Book Reviews

INFECTIO AND IMMUNITY. A Text-Book of Immunology and Serology for Students and Practitioners. By Charles E. Simon, B.A., M.D., Professor of Clinical Pathology and Experimental Medicine at the College of Physicians and Surgeons; Pathologist to the Union Protestant Infirmary and the Hospital for the

Women of Maryland; Clinical Pathologist to the Mercy Hospital of Baltimore, Maryland. Third edition, revised and enlarged. Illustrated. Lea and Febiger, Philadelphia and New York.

In this edition the author has availed himself of the opportunity offered by incorporating many of the recently ascertained facts concerning Infection and Immunity; also in the various serologic and allergic tests, a proper understanding of which is essential to the scientific practice of medicine.

Written primarily as a text-book, the volume presents reading that vies with many of the "Six Best Sellers." The author's happy faculty of stating a series of facts in a most interesting manner, together with the inherent fascination of the subjects treated, presents "Truth stranger than fiction."

The volume is handy, of some 350 pages. Each chapter is followed by an exceptionally well selected bibliography. Well prepared illustrations are used. The work is most appropriately dedicated to Paul Ehrlich, whom the author terms "The Grand Master of Experimental Medicine."

H. S.

PATHOLOGICAL TECHNIQUE. Including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By F. B. Mallory, M.D., Associate Professor of Pathology, Harvard Medical School; and J. H. Wright, M.D., Pathologist to the Massachusetts General Hospital. Sixth edition, revised and enlarged. 536 pages, with 174 illustrations. Philadelphia and London: W. B. Saunders Co., 1915. Cloth, \$3.00.

A review of this well established text of pathologic technique serves to impress upon the reader the thoroughness with which the authors and publishers have prepared it.

It is a worthy successor of the volumes which have preceded it; its general arrangement of contents is the same and, like them, it includes the more recent advanced tests in serology, pathology and bacteriology that have withstood the careful scrutiny of well recognized authorities in these several subjects.

No laboratory should be without this valuable guide. In our own laboratory it is referred to more than any other text, and as a result it is frequently not necessary to refer to others.

H. S.

THE CANCER PROBLEM. By William Seaman Bainbridge, A.M., M.D., Professor of Surgery in New York Polyclinic Medical School, etc. Macmillan Co., New York, 1914.

In a rather remarkable book Dr. Bainbridge

has compiled a large amount of interesting information and scientific instruction about cancer. This volume is better adapted to the needs of all classes of readers than any other of like nature which has come under our notice. History, statistics, theory and facts are presented in an impressive manner. The weaknesses of various theories are exposed, demonstrated facts are justly weighed, and a definite value is assigned them. The author clearly points out the need for a campaign of education concerning cancer to reach both physicians and people. His general conclusions strictly coincide with the most modern views of the best students of the world—that chronic irritation is a major factor in cancer production, that a pre-cancerous condition foreruns actual development, and that operation at the right time in proper manner performed will effect cure. A "General Bibliography" is a valuable feature of the book.

PRACTICAL MEDICINE SERIES. 1915. Volume II. General Surgery. Edited by John B. Murphy, M.D., with Charles L. Mix, M.D., and Roger T. Vaughn, M.D. The Year Book Publishers, Chicago. Cloth, \$2.00. Entire series, one year, \$10.00.

This is a splendid review of the surgical literature of the year. The introduction, by John B. Murphy, is worth the price of the volume, consisting, as it does, of pointed paragraphs in which the reader is told "what's what" in all the mass of investigation and publication of the year. In this volume of a very popular "series" the editors have done a remarkably thorough piece of work in condensing a wonderful amount of truly helpful information about surgery as it is done and about surgical diseases as they are known and understood.

OUTLINES OF INTERNAL MEDICINE. For the Use of Nurses. By Clifford Bailey Farr, M.D., Instructor of Medicine, University of Pennsylvania, etc., 408 pages, illustrated. Lea & Febiger, Philadelphia, 1915. Cloth, \$2.00.

The training and education of nurses are receiving more careful attention than ever before, and rightly so. Gradually the list of states in which the registration of nurses is required by law is growing and the practice of nursing is becoming more and more limited to those who have received proper training and are educationally qualified. Adequate instruction for nurses cannot be given through a few haphazard lectures, nor can actual bedside care of patients under physicians' directions furnish all that is needed. Lea & Febiger are publishing a "Nurses' Series," of which Dr. Farr's book is a volume. Our examination of this book leads us to believe that the author's conception of what is needed by nurses is correct and that he has presented the necessary instruction in a most pleasing and helpful manner.

THE JOURNAL

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NUMBER 4

THE DIAGNOSIS AND CHOICE OF OPERATION IN CERTAIN AFFECTIONS OF THE STOMACH AND DUODENUM.*

By J. M. T. Finney, M.D.,
Baltimore, Md.

I take it, that the majority, at least, of the members of the Tennessee State Medical Association are more or less in general practice, and, as such, are naturally interested not only in the diagnosis, but also in the surgical treatment of the various affections of the stomach and duodenum. I have, therefore, chosen this rather broad subject, a discussion of which will probably afford more general interest to my audience than one more special in character. Every practitioner, whether general or special, must have been struck with the great frequency with which stomach symptoms may usher in almost any affection.

Just consider, for a moment, the vast range of pathological conditions having their origin either in the stomach or out of it, or, indeed, entirely outside of the abdomen, which, not infrequently, present as one of their earliest manifestations nausea and vomiting, or some form of gastric disorder or distress. This is true not alone of organic affections, but of functional troubles as well. Outside the abdomen we see these disturbances of the normal activity of the stomach occurring, associated with such general conditions as pneumonia, tuberculosis,

brain tumor, the exanthemata, angina pectoris, arterio-sclerosis, eye strain, etc.

Associated with conditions having their origin in the abdomen, aside from the actual diseases of the stomach tissues themselves, we find it not infrequently occurring with purely functional disturbances, either in association or not with disease anywhere else in the body, such as hyper-acidity, hypo-acidity, hypomotility, etc., or due to functional disturbances of the stomach proper, such as the vomiting of pregnancy, appendicitis, intestinal obstruction of one sort or another, mesenteric thrombosis, acidosis, uraemia, etc. In arriving at a definite diagnosis, then, in any case of so-called stomach trouble, the physician will not infrequently be called upon to go over in a general way the whole ground indicated above, and, much more, before being able to discriminate between a case of real stomach disease and one in which the stomach symptoms, while prominent, constitute only a minor consideration, because secondary to some other pathological condition elsewhere in the body. A stomach case, so-called, may, after careful consideration, prove to be an inflamed appendix, a cancer of the rectum, a brain tumor, a gastric crises of tabes, cholecystitis, cholelithiasis, or what not. It goes without saying, then, a fact with which no doubt you are all familiar, that the diagnosis in any given case of stomach trouble is not always an easy matter. Not only it is not always easy, but it frequently cannot be made without calling to one's aid certain of the special diagnostic tests, and even then, in a small percentage of cases, we must leave the diagnosis to be determined, if at all, to the pathologist, or by the exploratory incision of the sur-

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geon. This is a rather humiliating confession in these days when our diagnostic ability, aided by the various established laboratory tests, has reached such a high stage of scientific development. But unfortunately it is perfectly true.

The question that interests us, then, as medical men assembled upon an occasion such as this, is to take counsel together as to how we can limit, as far as possible, the number of cases in which it is not possible to make a positive diagnosis and, on the other hand, how to increase the percentage of cases in which a definite flat-footed, correct diagnosis can be made. There are various aids at hand which can be invoked in order to bring about this much to be desired condition. In the first place, the hearty co-operation of the physician and surgeon. I know of no class of case in which it can be more truly said that the combined skill of the physician and surgeon is productive of greater results, indeed, is so absolutely necessary in order to produce results at all, as in cases of suspected disease of the stomach. To take a single illustration, what surgeon has had sufficient training in the technique of the chemistry of the stomach or, if he had, what one in active practice would or could take the requisite time and give the attention to the detail necessary to arrive at a definite conclusion? The same is true of the fluoroscopic and X-ray examination of the stomach. This requires special apparatus and technique, and the ability to interpret correctly the findings, which comes only from long practice and study of such conditions. If the speaker might be allowed a personal reference, he never operates on a supposed stomach case without having first had it thoroughly studied out and reported upon by a competent internist, or until he is satisfied that nothing more is to be expected from a further continuance of medical measures. But it may be urged that it is not always possible to secure the services of such an one, which, in country districts, is perfectly true. But it is equally true, a fact that should not be lost sight of, that questions of operative treatment for stomach diseases are not for the country doctor who only does a little surgery, of necessity, to decide, but for the thoroughly competent surgeon skilled in the care and treatment of such cases. If these facts are borne in mind, a long step forward will have been taken

in doing away with legitimate criticism which has been levelled at the profession in certain quarters and along these lines.

Every effort should be made to arrive at a definite and correct diagnosis before operation is resorted to. Every exploratory incision is in a measure a reproach to surgery, and a reflection upon our ability as diagnosticians.

As has been so ably pointed out by Hewes in a recent paper in the *Boston Medical and Surgical Journal*, dealing with the subject of diagnosis of stomach diseases, there are other aids that can be summoned to our assistance, if only we are careful to use them properly and to assign to each one its relative importance. Some cases of stomach affections are so obvious that "The way-faring man, though a fool" can recognize them. Here no special aid or skill is required in order to make a diagnosis. Take, for instance, the retention vomiting associated with mechanical obstruction of the pylorus, or the repeated severe hemorrhages from a bleeding ulcer. A great deal, indeed, the whole story can often be learned from the history, especially when carefully taken, and its important features recognized and properly interpreted, no easy task in many cases. Then a careful physical examination. One cannot insist too strongly upon the necessity for this. In an assemblage such as this, it seems almost foolish to insist on a thing so self-evident as a thorough carefully physical examination. But when it is constantly being brought to one's attention, that a thorough physical examination is not by any means always made, this reference to the fact and insistence upon it may be excused. A noted consultant of international reputation once facetiously remarked that so far as he could see, the chief difference between a consultant and a general practitioner was that the consultant made a rectal examination, while the general practitioner did not. This may seem a little over-drawn, perhaps, but it is brought home to me strongly by the fact that I have at the present time, under my care in the hospital, a patient who had been treated for a long time for stomach trouble by physician after physician, some of whom, I may say, were excellent men, without relief. No rectal examination had been made by any one of his numerous medical attendants.

This examination made after he had entered

the hospital simply in following the regular routine, revealed at once the cause of his trouble, in the shape of a well advanced carcinoma, which by that time had involved pretty much the whole rectal wall. Not long since, I operated upon a woman of middle age who had given a history of digestive disturbance referred entirely to the upper right quadrant. Her trouble had always been definitely located in this region. The clinical picture was a rather mixed one which her physician and consulting internist had not been able satisfactorily to unravel. The gastric examination was negative. Examination of the stools showed the presence of occult blood. The X-ray showed only some evidence of trouble causing adhesions about the gall-bladder. In other respects, the examination was practically negative. The diagnosis was probable chronic cholecystitis, to which the gastric disturbance was secondary, possibly duodenal ulcer. Incision through the right rectus showed the upper right quadrant to be perfectly normal, except for a few light adhesions about the gall-bladder. On looking further for an examination of her symptoms, I found a well advanced annular carcinoma of the sigmoid, whose presence the history and physical examination gave us reason to suspect. Cases of this sort can be multiplied. They occur in the observation of every surgeon of any considerable experience. The point which they emphasize is simply this—the extreme necessity of a careful and thorough physical examination which should always include an examination of the rectum. A favorite dictum of my honored preceptor, Dr. John Hormans, of Boston, and one upon which he used to insist, was, “No surgical examination is complete without a catheter in the bladder and a finger in the rectum.”

The trouble is that from the multiplicity of demands from all sources on the time and attention of the busy practitioner, he often cannot or does not make his examinations as thorough as is desirable, nor does he give sufficient thought and study to the individual case. The tendency of the times is to discount the fundamental importance of attention to details in the matter of diagnosis. For how often do we not hear in medical meetings such as this, speakers, sometimes of more than local reputation, declaiming against the dangers of the so-

called slow laboratory methods. We hear it stated that while the laboratory man is busy counting blood or looking for parasites or examining the gastric contents or the stools, the patient may be dying for want of immediate attention. The thing to do is to grasp the situation at a glance, instant decision, rapid execution, in other words, a more or less snap diagnosis. All this sounds very fine and appeals to the gallery; but when soberly analyzed, it means just this—incomplete histories, imperfect examinations, crude analysis, immature judgment, faulty conclusions, at times strikingly brilliant, perhaps, and at other times palpably, yes, almost criminally wrong. Are we, as a profession, ready to stand for this sort of thing? There can be but one answer. Those practices which are fundamentally based on accurate observation, careful analysis and scientific study will stand any test put upon them, and when properly applied in intelligent, conservative surgical practice, will redound to the increased longevity of the human race and to the credit of our noble profession.

In a previous paper, the speaker has endeavored to warn against this pernicious practice to which he has just referred, and has urged on the part of the examining physician or surgeon, the most careful study of every fact developed in the course of a carefully taken history, or a thorough routine physical examination. So much depends upon the proper sifting of the crude material thus obtained, and the relative importance to be attached to each particular fact or group of facts, and the correct interpretation of the various signs observed, that it is difficult to over-estimate the importance of a broad point of view, and the value of the special aids to diagnosis, the so-called laboratory methods. Here shines out with striking brilliancy that rare quality, that much to be desired possession known as “surgical instinct,” “good judgment,” or “uncommon sense.” Trite and hackneyed as all this may appear to some, nevertheless it is supported by the weight of ancient and honorable authority, for since the days of Hippocrates it has been recognized by those best qualified to judge that diagnosis is after all of relatively more importance than treatment, since on the correctness of the one, depends in large measure the effectiveness of the other.

The subject of diagnosis of the various gastric conditions is far too large to permit of adequate discussion upon an occasion such as this. One can do no more than refer to certain more or less well-known facts to illustrate the points made. The diagnosis, as has already been pointed out, is occasionally very easy. It may now and then be made from inspection, certainly from the history alone, but this is not often, and it is seldom that one would be justified in operating solely on the history without resource to the use of further methods of investigation at our disposal, such as the results of the gastric analysis and the X-ray findings. But careful and candid observers will tell you how misleading these may be at times. So often in the chemical examination of the stomach contents or feces one may be misled, for instance, by the presence of blood in greater or less quantity, into believing that an ulcer is present. Some years ago, in a paper upon the subject of "The Significance of Blood in the Stools" the speaker called attention to the long list of conditions other than those of cancer or ulcer of the stomach or duodenum in which blood is more or less constantly found in the stools. It was found not infrequently in connection with such conditions as appendicitis, gallstones, cirrhosis of the liver, certain of the grave anaemias, arterio-sclerosis, etc.

It does not do, then, to place too much reliance upon any one symptom or group of symptoms to the exclusion of others. There are few absolutely pathognomonic diagnostic signs. The words "always" and "never" are quite out of place in medicine, for it usually means only a little wider experience, a little broader observation and more knowledge to convince one that what he thought was absolutely sure, has its exceptions. So it is with the X-ray findings. Great as has been the progress in this direction, and helpful as it is as a means of diagnosis, it must not be forgotten that what have been regarded as definite pictures of certain pathological conditions can be caused by other processes. For example, a condition of adhesions of the stomach wall to surrounding structures may cause irregularities in the outline of the stomach walls, irregularities in peristalsis over portions of the wall, or general abnormality of the peristalsis itself—in other

words, the picture which is usually associated with the presence of ulcer or of an organic lesion, such as cancer. Here it is often necessary in order properly to interpret the picture, to summon to one's aid the experience of the trained Roentgenologist, the history of the case, the physical examination, the chemical findings, etc., before one can arrive at a proper solution of the question. So also reflex spasm, due to gall-bladder trouble, chronic appendicitis or a variety of nervous causes, may also come in and vitiate one's findings. Moynihan, in one of his characteristic and catchy epigrams has well said: "The commonest seat of stomach trouble is located in the right iliac fossa." Mayo equally effectively speaks of the telephonic connection existing, through the reflex nervous system, between the diseased appendix and the stomach. The exact value of the X-ray method as an independent means of diagnosis of stomach disease cannot as yet be determined, but when taken in connection with the clinical histories and other findings, it is a most valuable aid to diagnosis. Without these others, I should not attach too much significance to it, as there are so many possibilities for error, which up to the present time cannot be done away with. As a general indication for employment of medical measures, the history of a given case may be sufficient, but except in emergency, we are not justified in performing a surgical operation solely on the basis of either clinical history, the chemical and microscopical findings, or the X-ray examination alone.

While gastric surgery as practiced in certain famous clinics, by men of skill, through long experience, may be a comparatively simple matter, still, to the average surgeon who performs only an occasional gastro-enterostomy, for instance, it is a more or less formidable operation, and should never be undertaken lightly or without due regard to all the circumstances involved. For in the first place, let it not be forgotten that comparatively few of the diseases associated with gastric disturbances are cases for surgery at all, and a good many of those that are, under proper conditions, are amenable to properly applied medical measures, and just here due consideration should be given to the careful

differentiation of the various groups from each other, in order to prevent the reproach that is cast upon the profession of surgery by the performance of an operation that is not indicated, or the improper performance of one that is.

The idea which we had in mind in selecting a subject for this address was not that we had anything new to offer, for we have not, but simply to bring again to your attention the responsibilities that inevitably devolve upon us as medical men, for we are all human and need now and then to be reminded of our duties and responsibilities in the premises. The point we want to make is simply this—that the vast majority of cases presenting symptoms of either organic or functional diseases of the stomach are capable of diagnosis. In the present state of our knowledge some of them are not. At least the speaker experiences some satisfaction in thinking so, because now and then he meets with a case which, in spite of every care and the use of all of the known special tests and aids to diagnosis, and the assistance of skilled internists, is not correctly diagnosed. Be this as it may, the vast majority of cases, if properly studied, can be diagnosed. Recently the question of errors in diagnosis has been the subject of very interesting and careful studies by a number of observers, notably Cabot and Abrahams. The latter classifies diagnostic errors in two groups, (1) social, due largely to the personal equation of the physician himself, and (2) clinical errors, due (1) to ignorance, (2) faulty judgment, (3) obsession, (4) failure to think automatically, (5) failure to think at all, (6) reluctance to accept responsibility, (7) inherent difficulties in the case, (8) incomplete examination. It is evident at once that if his analysis is correct, some of these mistakes may be condoned and others not. Unquestionably the first and the last, ignorance and incomplete examination, are responsible for the majority of our mistakes, and these can be corrected. Indeed, all of them, except possibly those due to inherent difficulties in the case, may be overcome, and all the time, with our improved methods, this group is getting less and less. One might enlarge considerably upon this phase of the question, but it would lead us too far afield.

My idea is simply to call again to the attention of this group of medical men the fact that, in spite of human limitations, one can all the while improve one's powers of diagnosis and one's skill as a surgeon, by careful attention to detail, familiarity with current literature, and study of the methods of those who are acknowledged to be masters along these lines.

In considering the question of the choice of operation in a given case of gastric disorder the first thing to determine is whether or not operation is necessary at all. How may this be accomplished? There is no rule of thumb by which it can be done. It requires careful study of the individual case, sometimes extending over a long period of time, and a thorough knowledge of the clinical course of similar cases, treated both medically and surgically. This comes only by conscientious observation of one's own cases and those of others as recorded in the literature. So many of us, and the speaker is forced to include himself in this category, are so busy in one way or another with professional and other duties, that it not infrequently becomes a physical impossibility to give the amount of time to thought and study of our cases that we ought. Thus we do not learn thoroughly enough the lessons that our experience should teach us. We are prone to forget our mistakes, and it may be to magnify our successes. All this is done unconsciously, perhaps, and with the best of intentions, but, nevertheless, it goes on until suddenly we are brought face to face with the true condition of affairs by some incident, or it may be accident, that forcibly arrests our attention and directs it to the fact that we have fallen into a professional rut, that our patients are no longer individuals but things, just to be ground through the surgical mill, each one tagged and numbered, his personal identity lost. Have I overdrawn the picture? Perhaps, but in many cases I think not. At any rate, one of the great factors that militates against giving one's best judgment to a given case, whether in the matter of diagnosis or the question of treatment, is failure, from whatever cause, to study the case sufficiently, and then to weigh properly the evidence for or against proposed operation. With added

years and accumulated experience comes increasing caution. This may be due partly to a lessened enthusiasm, or a growing disinclination to the mental and physical exertion necessary to plan or carry out an extensive surgical operation. Whatever the explanation, and it may be all these factors have an influence, it is a rule, with few exceptions, in the speaker's observation, that ripe experience is invariably accompanied by judicial caution; by a conservatism which, while it may be at times almost startling in its radicalism, is, nevertheless, fundamentally based upon sound pathology and rational physiology, backed up by actual results and tried by the test of time. So it follows that in matters of diagnosis a wider experience and deeper penetration into the mysteries of physiology and pathology will slowly but surely lessen that large group of cases which, for what of more definite knowledge, are classified as neurasthenics, psychasthenics or as belonging to that class of unfortunates who are neither sick nor well, but always ailing.

Brown, in a recent paper entitled "Gastric Dyspepsia Due to Intestinal Diseases and Intestinal Indigestion of Gastric Origin," discusses in a very convincing and thorough manner the intimate association and relationship existing, through an unstable nervous apparatus, between these two conditions, and the consequent transference of symptoms from the seat of the disease to some more or less remote region of the body. He refers especially to the chronic diarrhoeas not infrequently met with in old people or those with defective teeth, due to an achylia gastrica, in which the simple administration of hydrochloric acid in conjunction with a non-irritating diet will yield brilliant results when sedatives, astringents and intestinal antiseptics have signally failed. He also emphasizes a point particularly dwelt upon by Moynihan and others, namely, that in all cases of gastric dyspepsia of long duration, especially if the symptoms show exacerbations from time to time, particularly if the patients present the body form so characteristic of splanchnoptosis, and if no success has been met with by treatment based upon the diagnosis of a nervous dyspepsia or psycho-neurasthenia, the underlying cause is frequently found to be

a latent or chronic appendicitis without local manifestations. Such an organic lesion may prove to be the physical cause of the psychic and nervous disturbances in one so predisposed. The case with the definite organic lesion is usually easy to recognize and handle, but the chronic gastric neurasthenic, so-called, is an individual that one soon learns to hate to see come into one's office. But these troublesome individuals are not infrequently misjudged. Some time ago I operated upon one of the very pronounced, fat, pale, anemic type. This patient had run the gamut of treatment for digestive disturbance of one sort or another, and had consulted many physicians. I am frank to say I could make no definite diagnosis. My sole basis for operating was the conviction that here was a man who insisted that he was continually suffering great distress in the upper part of his abdomen, and had done so for a long time, and that no treatment that he had received had given him any appreciable relief. The operation was purely exploratory in character with no fixed idea as to what, if anything further should be done, but it was undertaken in the hope that surgery could give him the relief to which he was entitled and which had been denied him through medical measures. I found a spindle-celled sarcoma of the small intestine, high up, and encroaching upon the lumen of the gut. This was excised, together with its mesentery, and the patient treated subsequently with Coley's serum. So far, after over three years, there has been no recurrence of his trouble, and the patient has been completely relieved of his symptoms. This patient had been adjudged a confirmed neurasthenic by everyone who had seen him, simply because they could find no adequate explanation for the very typical symptoms complained of, and because he was of a very highly nervous temperament. Everyone is familiar with the frequent association of splanchnoptosis with the neurotic symptom complex just referred to. Great difficulty is experienced, not infrequently, in this class of case in determining between cause and effect. There is excellent opportunity presented just here by this combination of circumstances for a lot of amateurish, ill-advised and not infrequently harmful surgery. In this category the indiscriminate

stitching up of floating kidneys, dropped stomachs and sagged colons, to say nothing of the more radical and mutilating operations upon the big bowel which are strongly advocated and practised in certain quarters, often without sufficient indication. "We must not forget in the study of these cases, that function is more important than form, physiology than morphology. The assumption that a change in position in the intestine from horizontal to vertical will materially increase the difficulty of propulsion is contrary to the fact that for eons of years this has been taking place in certain portions of the intestinal tract with no apparent disturbance. It is lack of tone, not displacement, per se, that is the cause of the trouble, although in the origin of this atonic condition, adhesions, displacement, kinking and constriction may all play a part." (Brown).

After it has been decided that some operative procedure is really necessary, owing to the severity of the symptoms and the progressive nature of the disease, one should then consider, in the first place, what one expects to accomplish by the operation. Is it simply a palliative procedure undertaken to give temporary relief to the patient, or are we justified in expecting and offering a cure? A definite decision as to this question cannot always be arrived at before hand, because, as has already been pointed out, of our inability to make an absolute diagnosis, so that not infrequently one cannot tell until after the abdomen has been opened and the nature of the pathological process present determined, just what really is indicated or can be accomplished. The point I want to make is simply this—that when a choice of operation is offered in a given pathological condition, upon what basis are we going to determine the operative procedure to be carried out? Is it on the basis of habit? Because one has been accustomed to do a certain operation, under certain conditions, is one going to continue to do it in spite of other operations or newer modifications which offer just as good or better results; or is it a matter of fashion, because there are fashions in surgery just as in clothes and many other things? Or, is every individual case to be decided on its own merits and due weight given to the relative advantages that are generally accepted as

belonging to every operative procedure? The answer given to this question would be, I imagine, by the vast majority of surgeons, the third proposition, namely, to decide every case on its own merits, but unfortunately this is just what is not done in many cases. We are, in spite of ourselves creatures of habit. We get into the way of doing things almost by rote, and, as has already been indicated, so often operations are done without due regard to all the considerations involved.

We have not the time, and it would overtax your patience to go into detail as regards arguments for or against the various operative procedures. Let us take, for example, and consider for a moment, the relative merits of two only of the most common operations performed on the stomach, namely, gastro-enterostomy and pyloroplasty. With the majority of surgeons, the operation of gastro-enterostomy is the operation of choice. There are many reasons for this; in the first place, it is an operation attended with very low mortality; it is a comparatively simple procedure to one who is accustomed to do abdominal surgery. It gives very satisfactory results in the large percentage of cases, and so without much consideration or thought, the average surgeon, when he finds evidence of obstruction about the pylorus, or active ulceration in the stomach or duodenum, proceeds at once to perform a gastro-enterostomy. On the other hand, for one reason or another, pyloroplasty with some surgeons is the operation of choice and, for substantially the same reasons as those given for gastro-enterostomy. What factors, then, should determine us in deciding between these two conditions? In order to try to answer this question intelligently, with the aid of Dr. Julius Friedenwald, for whom I have performed one or other of the operations in many of the cases reported, I have endeavored, by studying carefully the early and late results in the first one hundred cases of pyloroplasty, and the first one hundred cases of gastro-enterostomy operated upon by me to determine the relative advantages and disadvantages of the two methods. These have been studied as carefully as possible, both early and late results, and compared. Some of these cases extend back over a period of fifteen years and, of course, are the earliest cases that I have operated upon. It is only

fair to suppose that owing to improved technique and greater experience; the last one hundred cases of each operation would show a decreased mortality and an increased percentage of satisfactory results. In our study of one hundred cases of pyloroplasty reported in 1914, we felt justified in drawing the following conclusions:

(1) The operation has its greatest indication in the relief of pyloric stenosis due to chronic ulcer, situated at or near the pylorus, and on either side of it, or resulting from cicatricial contraction following the healing of such ulcers. It is often a useful procedure in case of hemorrhage due to gastric ulcer on the lesser curvature or to duodenal ulcer, which cannot be controlled medically, and which threaten the life of the patient, as well as in the chronic dyspepsias due to ulcers which have not been relieved by medical treatment.

(2) The operation has certain advantages over gastro-enterostomy and but few of its disadvantages.

(3) Such objections as are urged against the operation, e. g., its inapplicability in the presence of adhesions surrounding the pylorus, as well as in the presence of active and bleeding ulcers, and also because of the fact that the new opening is not at its lowest point, taking advantage of gravity are, according to our experience more fanciful than real, since the operation has frequently been performed under these conditions with most gratifying results. The interesting experimental work of Cannon and Blake and others supports this contention.

(4) The only contra-indications to the operation are inability to mobilize the duodenum when adhesions are too dense, and thickening and infiltration about the pylorus due to hypertrophic forms of ulceration. These conditions, however, in our experience occur but rarely.

(5) In atony or gastroptosis with slight motor insufficiency such as is observed in the water-trap stomach, or in nervous dyspepsia, i. e., in gastric disturbances not dependent upon organic disease, this operation is contra-indicated. Pyloroplasty is contra-indicated in cancer of the stomach.

(6) The special advantages of this operative procedure lie in its affording the opportunity to excise all ulcers whether perforated or not in the anterior walls of the stomach or

duodenum after direct inspection of the part affected, also the application of treatment to ulcers situated in the posterior walls. It does not greatly disturb the normal relationship between the stomach and intestines, as is the case in other operations.

(7) From our experience with the operation, the immediate as well as the final results are most encouraging. While in some instances, partial gastrectomy or gastro-enterostomy is undoubtedly the operation of choice, nevertheless, on account of its simplicity and because of its satisfactory end results, we believe that pyloroplasty will continue to retain its position as a safe and useful procedure.

In the study of one hundred cases of gastro-enterostomy, we have excluded, of course, those operated upon for malignant disease, as it would not be fair to compare benign with malignant conditions.

In the one hundred cases of gastro-enterostomy, there were fifty-six males and forty-four females, while in the pyloroplasty cases there were sixty-three males and thirty-seven females.

The symptoms appeared in the following proportions in the gastro-enterostomy cases:

Pain, 90 per cent.
Vomiting, 65 per cent.
Haematemesis, 23 per cent.
Melaena, 44 per cent.
Retention, 36 per cent.

In the pyloroplasty cases:

Pain, 92 per cent.
Vomiting, 64 per cent.
Haematemesis, 21 per cent.
Melaena, 46 per cent.
Retention, 42 per cent.

In the gastro-enterostomy series there were forty-six of gastric ulcer, thirty-two males and fourteen females. Thirty-eight duodenal ulcer, fifteen males and twenty-three females, making a total of eighty-four cases in which ulcer was present and its location definitely stated.

In the pyloroplasty cases, there were fifty-five gastric ulcer, thirty-six males and nineteen females. Thirty-two duodenal ulcer, twenty-one males and eleven females, making a total of eighty-seven cases in which the presence of ulcer was definitely noted. It will be observed

that there was a preponderance of gastric over duodenal ulcer in both series.

In sixty-seven of the gastro-enterostomy patients operated upon for obstruction, forty-four were due to gastric ulcer, fourteen to duodenal ulcer and nine to adhesions.

Pyloroplasty was performed for obstruction in fifty-one instances from gastric ulcer, in seven from duodenal ulcer and in six from adhesions. The adhesions in these cases were due either to an old ulcer or to a cholecystitis. Secondary operations were performed to correct immediate or subsequent difficulties four times in each series.

The operation of gastro-enterostomy proved satisfactory immediately in 82 per cent, and unsatisfactory in 18 per cent.

In pyloroplasty it proved satisfactory in 90 per cent, and unsatisfactory in 10 per cent.

There were seven deaths following immediately upon the operation of gastro-enterostomy and five following pyloroplasty, giving a mortality rate of 7 per cent and 5 per cent, respectively.

Of the seventy-seven cases of gastro-enterostomy followed during the first year of the operation, the results were satisfactory in 84.4 per cent, and unsatisfactory in 15 per cent.

Of the eighty-two cases of pyloroplasty the results after one year were entirely satisfactory in 93 per cent, and unsatisfactory in 6.1 per cent.

The end results in the gastro-enterostomy cases showed a percentage of 77.2 per cent of satisfactory recoveries.

The end results in the pyloroplasty cases showed a percentage of 88.6 per cent of complete cures.

It would thus appear from the study of this series of cases that in our hands, at any rate, there was a definite although slight advantage in almost every respect in favor of pyloroplasty. It must be said, however, in justice to the operation of gastro-enterostomy that as these were our earliest cases (which, of course, is also true of the pyloroplasty operation,) some of them, although a small percentage, were done after the earlier method, that is, with an anterior long-loop anastomosis. Most

of them, however, were done by the present day accepted methods. The particular direction in which gastro-enterostomy seems to be indicated over pyloroplasty is those rare instances in which there is an inability to mobilize the duodenum, due to too dense or to extensive adhesions, and to those cases in which there is a great thickening and infiltration about the pylorus, conditions which in our experience occurred but rarely. On the other hand, in gastro-enterostomy there is no possibility of excising the ulcer, which can be frequently accomplished in pyloroplasty with, I believe, distinct advantage if the prevailing idea as to the close etiological relationship between ulcer and cancer of the stomach is accepted. From our experience, as related above, we have come to believe that pyloroplasty has distinct advantages, although slight perhaps, over gastro-enterostomy, which renders it the operation of choice, except where contra-indications, as indicated above, are present, and also in the presence of malignant disease.

Time forbids a discussion of other operative procedures upon the stomach but, in closing, we would like to emphasize the advisability and necessity of radical measures in dealing with ulcers presenting any suspicion of malignancy, as well as in those cases where malignant disease has already developed, which present a reasonable hope of complete removal. In this connection, Rodman's operation certainly has a great deal to commend it, and I believe an increasing field of usefulness is before it. Excision of a portion of the stomach by one of the accepted methods is undoubtedly indicated in every case where the findings are sufficiently favorable to justify it. With our increased ability, due to improved diagnostic methods, to recognize and differentiate our stomach cases earlier, and with an enlightened public and a profession alert to the great need for surgical treatment in gastric or duodenal ulcer which does not respond promptly to medical treatment, we may confidently expect to see ere long a definite decrease in the mortality rate from cancer of the stomach, and a corresponding increase in the average length of human life.

SOME FEATURES IN THE MANAGEMENT OF INFECTIOUS DIARRHOEA.*

By O. H. Wilson, M.D.,
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Recent studies in the bacteriology of infections diarrhoea, or ileo-colitis, have made such changes in its accepted treatment that I have decided to present a paper on this trite subject.

The dietetic management has been given even more prominence, and has been placed upon a rational basis. Everyone admits the propriety of initial starvation, but experience has shown that this has been carried entirely too far; very young or very weak babies bear starvation badly, and die of exhaustion, even though they survive the toxæmia. Morse, in the January issue of the *American Journal of the Medical Sciences*, has done much to rationalize the feeding of these cases, basing his observations chiefly upon the bacteriologic research of Kendall and Smith, and while these conclusions have not been tested practically here, they are certainly in accord with clinical experience.

Micro-organisms are the accepted primary cause of infectious diarrhoea, and while of varied kinds, they may be divided into two classes, according to their cultural peculiarities. First, those thriving upon proteid media, and secondly those thriving upon carbohydrate media. Under the first we find the dysentery bacillus of Shiga, the colon bacillus, streptococcus and the bacillus pyocyaneus the most important. Under the second head we find the gas bacillus and allied organisms.

The practical result of this classification is the determination of the character of foods best suited to each case. After a preliminary purgation, during the passage of which we withhold all foods, we should begin at once to fill the alimentary canal with a substance, which, while serving as a very dilute food, will form a medium in which the specific in-

fecting bacterium will not thrive and produce toxic substances.

The bacteria of the first class, dysentery, colon, etc., while growing on both carbohydrate and proteid media, produce harmless substances from the carbohydrates, and toxic products from the proteids, and moreover in attacking and breaking down the carbohydrates their product has an inhibitory action upon further growth, hence we see that in infections due to any of this group, we should, after the first twenty-four hours of the initial cleansing purgation, begin to fill the intestinal canal with the protective carbohydrate, using at first a weak sugar solution, preferably lactose, followed after the abatement of symptoms with cereal gruels, which may be flavored with fruit juices, for instance, to make them palatable, and this should be continued until improved conditions permit trials of modified milk.

Morse emphasizes the necessity for beginning nourishment early, not only to conserve the strength of the patient, but also to provide suitable antagonistic cultural media as the intestinal content. During starvation the alimentary canal is filled with the intestinal secretions, which are proteid in character, and in which the bacteria of the first class grow and produce toxic material, thus showing the necessity of this type of infection of beginning as early as possible to replace a starvation exudate with the carbohydrates.

If this infecting organism is the gas bacillus the dietetic indication is to cut down the carbohydrates and administer proteids. The gas bacillus, however, is very susceptible to the action of lactic acid, hence the additional indication of introducing lactic acid producing germs into the intestine to counteract the growth of the gas bacillus, and under these circumstances we must use carbohydrates to form a medium for the growth of germs used in the production of lactic acid. Morse advises in such cases a fat-free butter milk.

It is quite evident that these two types of disease require directly opposed dietetic management. It is at present impossible to differentiate clinically infections due to the various organisms, or even to assign them to one or the other of these two classes, though it

*Read at meeting of Tennessee State Medical Association, Nashville, April, 1915.

can be done in twenty-four hours in a well equipped laboratory. Morse suggests the following simple test for the gas bacillus: A portion of stool is added to a test tube of milk which is boiled three minutes in a water bath, then incubated at body temperature twenty-four hours; the spores of the gas bacillus resist the heat, while the non-spore forming organisms are killed. If the gas bacillus is present the casein is largely dissolved and the residual casein becomes spongy, filled with holes and rather pink in color with the odor of rancid butter.

It has been found that usually local epidemics are due to one prevailing causative germ, so having worked out one or two cases, we may safely assume the same infection in other cases in the same locality at the same time.

We may roughly empirically determine the class to which the infecting organism belongs by watching the results of feeding, as for instance, if, by filling the alimentary canal with a mild carbohydrate solution the clinical picture improves we may assume that the infection is one of the germs of the first class. If it fails to improve and a change to a proteid content seems to diminish the symptoms, we may assume it is a gas bacillus infection.

I wish to repeat that the above suggestions are mainly taken from the work of the Harvard School of Pediatrics, and as my attention was only called to these facts last summer, I have had little personal experience with this method of feeding, but it certainly coincides with the following clinical observations. First, that we starve too much; second, that certain cases thrive best on carbohydrates, I think, the majority; third, that certain cases thrive best on the proteids, and fourth, Bulgarian lactic acid cultures (I have not had the temerity to use butter milk in the acute stages) seem occasionally to work wonders, though generally are worthless. After the approaching summer I trust I may be able to report more accurate observations.

The pressing indication throughout an attack of infectious diarrhoea is water. A child may live long without food, but water is a necessity, and many of the distressing nervous symptoms are probably due to lack of

water, which is being eliminated excessively by bowel, by vomiting, and by skin action, and when food is withdrawn the water supply is cut off also. Water must be given in a measured quantity, equal, if not exceeding, the amount of food usually taken. Not only is this necessary for the functional activity of all organs, but sustains the volume of the blood, dilutes the toxins, and facilitates elimination. If not possible to give this by the mouth, it may be tried by Murphy drip, which may succeed even in cases of severe irritation of the lower bowel with frequent diarrhoea. This failing, we must give it under the skin. Water is absolutely essential to sustain life. Water starvation is usually seen in the second week, and is manifested in the dry, parchment-like skin, sunken eyes, depressed fontanelle, suppression of urine, dry mouth with delirium and other distressing nervous symptoms, which, while probably toxic in origin, can be much ameliorated by the use of sufficient water from the beginning.

Fatalities in infectious diarrhoea in the early part of its course are due to the intensity of the toxæmia, too frequently beyond our power to prevent, though we may modify by the dietetic methods above discussed and by the full supply of fluids. Later on babies die of starvation, often they survive the storm of toxæmia only to die after the abatement of furious symptoms, from inability to assimilate food of any kind, and yet nothing is so disastrous as premature attempts at feeding, causing an exacerbation of all symptoms and necessitating a repetition of the preliminary starvation and cleansing purge, and another period of watchful waiting until you feel warranted in further food trials.

Summarizing the diet, we may say that the first twenty-four hours during the initial purgation, only water should be given, then following either a carbohydrate solution, as milk sugar, and then cereal gruels in the Shyga or coli, etc., infections, or the albuminous fluids in the gas bacillus infections, and after improvements in diarrhoea and in toxic symptoms, milk should be very cautiously, tremblingly tried. Milk in some form is the only thing that will build up a patient

from a severe attack of infectious diarrhoea. Cereal gruels and proteid solutions do little more than afford a more palatable way of supplying fluids to the system, and provide unfavorable culture media for the invading organism, during which time the patient continues to lose strength and vitality. In the early part of the disease our constant effort is to combat toxemia, in the latter to get back to milk feeding as soon as possible, and anything to abbreviate this ante-milk stage is of obvious advantage. Ordinary milk mixtures even very low in fat and proteid cannot be attempted until the temperature is normal and the stools much reduced in frequency and improved in character. This in severe cases is about the end of the second week or even later. Many text books, written in cooler climates, refer to a return to milk on the third or fourth day, but sad experience has frequently proven the fallacy of this advice in this section. Milk must not be attempted during the persistence of acute symptoms.

To lessen the mortality of infectious diarrhoea we must find some way to shorten this ante-milk starvation period. For the past fifteen years I have been successfully using modified human milk under these circumstances. This may be safely given at least one week earlier than cow's milk, even in the presence of a milder grade of acute symptoms, slight temperature and some diarrhoea. If not assimilated, the soft flaky curds are by no means so likely to cause rerudescence as the larger, more irritating masses of the cow's milk curd.

To begin with, would use one feeding of one-eighth strength human milk, possibly even skimming it, once daily, increasing in strength and frequency, then gradually changing to cow's milk. The total time on breast milk is rarely two weeks. I have used one wet nurse in twelve cases in less than a year. Of course the baby will not take the breast, and even if this were possible I would prefer giving diluted milk at first, and would like to know exactly how much is taken, so that the milk must be extracted and given modified. I am aware of the fact that this is difficult to obtain, but have never failed

when it was suggested that it was cheaper than funerals. In feeding human milk in this way, I believe there is almost no risk of tubercular or syphilitic infection, though I would insist upon a careful examination of wet nurse and her child. It is much easier and cheaper to get the consent of a woman to furnish six or eight ounces of milk twice a day than to persuade her to give up her family duties and take a twenty-four hour a day job as a regular wet nurse. I have had to use as many as five wet nurses to secure sufficient quantity for a single patient. Of course there is no disadvantage in mixing it. Herd milk is said to be even preferable.

In every severe case breast milk is certainly advisable, though in milder ones or in older children it is not essential. It is only a stepping stone to cow's milk.

To facilitate the beginning of cow's milk mixtures the use of Dextri-maltose has proven quite satisfactory in modifying the first mixture. We would suggest either the Mead & Johnson's preparation, or preferably, the malt soup, using at first one-fourth skimmed milk, boiled, making a formula of one-half per cent fat, one per cent proteid and about 3 per cent sugar, increasing this gradually as digestion improves. Dextri-maltose seems to greatly facilitate the digestion of both fat and proteid, as well as to provide an easily assimilable form of carbohydrate. It may, however, prove too laxative or produce vomiting, so begin weak.

Regarding the drug treatment, while by no means a nihilist, I believe drugging is vastly overdone. The initial cleansing purgative is generally accepted, castor oil or calomel or both, but after that, stop. Repeated purgation in the vain attempt to change the character of a stool is productive of dangerous irritation if not prostration. There is rarely any necessity of repetition of a purgative unless there seems a sudden increase of symptoms. Intestinal antiseptics usually disorder digestion and destroy appetite, with little or no good to their credit. Even inoffensive bismuth blinds you by interfering with intelligent observation of the stool, or when not assimilated, may become an irritant.

Opium is an extremely useful drug, not at all to control the diarrhoea, as in so doing we

should only restrain nature's effort to rid herself of the infection, but simply to give rest and sleep to the exhausted, pain-racked sufferer. Sleeplessness and pain, not diarrhoea, indicate opium, and even then it must be given guardedly. As the stomach under such circumstances is always unreliable, and absorption slow, morphia subcutaneously is always preferable. It should be given in small doses, repeated only as symptoms demand.

Stimulants are needed in nearly every severe case, though in these days of distorted ideas of stimulation, it is difficult indeed to advise what to use. Whether regarded as a food or a stimulant, a weak mixture of some form of alcohol seems to do good in the early stages, supplying a concentrated non-toxic form of nutrition without favoring germ growth. Caffein and caffein-sodium-benzoate, and camphor, and strychnine have their advocates. To do any good they should be given early and accurately, and here again the precise hypodermic method is preferable.

The initial colon irrigation, as a means of assisting in cleansing the canal, is always advisable, though its daily repetition depends upon circumstances. The indications for it are, first, high temperature, when a colon irrigation with cooler water may prove helpful in the control of temperature and assist elimination, and secondly, severe tenesmus, which may be thus relieved, though in many cases seems rather to be aggravated.

DISCUSSION.

DR. OLIVER W. HILL, KNOXVILLE: I have enjoyed Dr. Wilson's paper very much because it is intensely practical.

With reference to a proteid diet, my observation has been that there are very few children who will do well on proteids at all. They soon begin vomiting, caused perhaps by acidosis or the accumulation of the proteid end products. They have an enlarged liver and other attendant troubles. However, I am practically alone in taking that view.

As to the use of carbohydrates, in the first place, children will live for some time on carbohydrates, because there is a considerable fat residue to draw from. The carbohydrates will assist in the combustion of these fats by the stimulation of the metabolism of the liver. This is a proven fact. As Dr. Wilson has said, it is a long time, if a child has infectious diarrhea, before it can

take milk. Sometimes you will have cases that get along nicely, while in other instances they do not. The child may have enough of cow's milk to form some of the toxins or culture media for bacteria, or sufficient to cause a biochemical toxin with the proteid of the milk.

I evidently misunderstood Dr. Wilson when he stated that in these cases in which he wanted starch or carbohydrates, diluted butter-milk or whey was used. Diluted whey is nothing at all but proteids in water.

It has been my observation that when a child gets into a state that it requires hypodermatic medication, it is all in, and it is practically useless to give the medicine. I prefer to give stimulants, by mouth, unless there is persistent vomiting. I give opium by mouth. I have had satisfactory results from the use of deodorized tincture of opium diluted with alcohol. I use alcohol in the beginning, either cognac or diluted corn whiskey, always without sugar. I find children will take alcohol without sugar for a much longer period of time without vomiting than with the addition of sugar. Why the addition of sugar to the alcohol should cause vomiting I do not know, but it is nevertheless a fact.

Another thing which is much lauded is egg albumin. It has been worthless in my hands. Children will bear it for a short time and then stop. No matter what the trouble is, this is a fact. Within the month my attention was called to this when I had fourteen cases of pneumonia in the Knox County Industrial School. Two of them began vomiting, and the next day two more. The nurse, without orders, had been giving egg albumin every two hours. We stopped albumin and the vomiting ceased, then we gave bicarbonate of soda with immediate results, proving to me that it is some form of acidosis.

With reference to taking water, in children who are not able to retain the water, if you will add a small amount of sodium citrate you will find the children will retain the water much better.

Another thing with reference to mother's milk. Occasionally some children will retain cow's milk when they will not retain human milk. In one case I tried six wet nurses without much benefit, after the child was placed on a low fat modification it improved rapidly. Occasionally a child will not take carbohydrates, or proteids, but it will take a weak dilution of fat or cream. Each child is absolutely a law into itself. However, you will find the rules laid down by Dr. Wilson about careful management, returning cautiously to cow's milk, employing a wet nurse when required, to be very helpful, and if followed carefully will help to cut down your mortality still more. I wish to thank Dr. Wilson for his paper.

DR. WILLIAM LITTERER, Nashville: Infectious diarrhea is due to a multiplicity of micro-organisms, as Dr. Wilson has pointed out,

and that is one reason especially why we have not been very successful in finding a serum. Certainly it would be a great thing if some serum or a prophylactic vaccine of some sort could be discovered, but as there are such a multiplicity of micro-organisms which cause this infection or condition, it renders such a line of treatment practically impossible.

I was glad to hear Dr. Wilson discuss from a scientific standpoint the importance of examination of the stools in a systematic way. It is a fact that if an individual should be suffering with gas bacillus infection, or from any of the allied groups, an entirely different treatment should be instituted as compared with the pyocyanus, streptococci and dysentery groups. In the first group, that is the streptococci, the dysenteric and pyocyanus group, a carbohydrate diet should be given for the reason that they produce harmless products from this kind of diet, whereas if proteid diet be administered, then toxic substances would be manufactured by these bacteria. Not only will these bacteria form harmless products from carbohydrate diet, but they will form substances such as lactic acid that inhibit the growth of other bacteria as well as prevent their own growth by the manufacture of a large amount of this lactic acid. Lactose or milk sugar in the form of 5 to 7 per cent solution in water is the preferable carbohydrate for the reason that a larger proportion of lactic acid is formed than from other sugars. The prolonged withdrawal of food is contraindicated because the intestinal contents are then made up entirely of intestinal secretions, which are protein in character.

Concerning the gas bacillus and allied organisms will say that the logical thing to do in such cases is cut down the carbohydrates in the diet and to introduce acid-producing bacteria into the bowels. Proteids in the form of whey or better milk ripened with lactic acid-forming organisms should be administered. It is not possible to cut out the sugar entirely, because if this is done the lactic acid-forming organisms will have nothing on which to grow. The lactic acid already present in the food exerts an immediate inhibitory action upon the gas bacillus, while the lactic acid-forming organisms in it, by keeping up their production of lactic acid, continue this action.

Regarding the bacillus *Bulgaricus* will say that there are many products on the market, some are in compressed tablets others are in liquid state. Many of the products are absolutely inert, as shown by the exhaustive experiments of Bendick, which appeared in *The Journal of A. M. A.* of March 6th. These products should be tested in order to be sure that you are obtaining the living bacilli.

DR. WILSON (closing): I wish to reiterate that these remarks were not taken from books, and that I have had no practical experience in this line. It seems to me that we are working on

practical lines when we can divide our cases bacteriologically under two heads, with some special practical point in view. That was the reason I took occasion to present this paper.

I really believe that the majority of cases we get here are not of the gas bacillus type, although Morse has assured me they were equally divided in Boston. They have had as many gas bacillus infections as of the other group. From my experience, I can readily see that there are occasionally cases in which egg albumin, broths and whey can be given with advantage, but it has been unusual, and I think the majority of cases do better on carbohydrates. This summer I would suggest in beginning to treat our cases of diarrhea, that we first try them out on carbohydrates, and if they fail to improve when we fill the alimentary canal with carbohydrate solution, I would suggest proteids. The method of using both proteids and carbohydrates has been considered irrational.

I want to impress upon you the necessity for adopting one rule or the other. My experience seems to tend toward the fact that the great majority of cases do better upon the carbohydrates. Carbohydrates produce an anti-toxin or an antiseptic product when they break down. With such a logical bacteriological classification I feel sure we should keep to that line during this summer.

I would like to have discussed the possibility of transmitting syphilis and tuberculosis from the wet nurse. I believe when you draw milk out you have little danger of transmitting either one of those diseases. You are not likely to draw any milk from a tuberculous mother. In syphilis I do not believe the germs would grow or maintain their life to any extent unless the milk was kept very warm. It is difficult to cultivate the germs of syphilis. It may live in milk, but I don't believe it will.

EPIDEMIC OTITIS MEDIA—A STUDY OF ITS MANIFESTATIONS.*

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The term epidemic otitis media as used by me does not necessarily imply that direct contagion plays an important role in the causation of the condition or conditions which I am about to discuss, but is used in a sense of

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conveying the meaning of a widespread and generally prevalent disease.

The last month of winter, and the first month of spring, especially in our Southern states, witness a great increase in acute exudative inflammations of the middle-ear, usually "catarrhal" in nature at first, and then assuming a purulent form. These occur at the so-called "grippe season," a time when it is so customary to denominate almost every catarrhal inflammation of the nose and throat, accompanied by fever, as grippe, whether the influenza bacillus be present or not. True, it is held that it is not necessary to have the influenza bacillus present in order to have influenza, but to me this seems to be sailing under false colors, and my observation has been that the symptoms of this catarrhal condition are much severer when the influenza bacillus can be demonstrated. Doubtless most of the cases which are diagnosed as influenza in our section of the country are really a type of catarrhal fever, with no bacilli present in the exudate, various forms of cocci being the causative agents of the inflammatory reaction.

With a view to determining definitely the question of whether the influenza bacillus is to be regarded as the chief etiologic factor in our annual vernal epidemic of median otitis, I this spring undertook a bacteriologic study of the pus obtained from a series of cases of acute middle-ear inflammation, which started with catarrhal manifestations, and then assumed the purulent type, and in which I did a myringotomy.

In obtaining specimens from discharges of this character for cultural study it is necessary always to bear in mind the constant probability of secondary infection, thus neutralizing the value of one's results. It is practically impossible to be sure of absolutely uncontaminated material for inoculation of culture tubes in purulent otitis media unless one should resort to cleansing the external auditory canal and membrana tympani with an antiseptic, such as alcohol, and then plunging a sterile hypodermic needle through the membrana tympani, and thus removing pus for inoculation of culture tubes, but this, of course, would be out of the question in dealing with private patients. However, I did use every precaution that could reasonably be expected for obtaining uncon-

taminated cultures in the cases where a study was conducted. The cases from which specimens were taken were where pus flowed freely at the time of the incision, and where immediate inoculation of culture tubes was made from the first gush of pus. Prior to making the incision, the external auditory canal was sterilized with absolute alcohol. In a series of nineteen myringotomies in private patients, done within a period of ten days, only eight were taken for cultural investigation, the remainder, for various reasons, chief of which was lack of pus flowing at the initial incision, but coming on subsequently, not being considered suitable for study. These patients were seen in various portions of the city, and not confined to any one locality.

In this series of eight cases the ages ranged from two to fifty years. The cultures were grown on blood-agar, which is the only medium on which the influenza bacillus will satisfactorily grow. In only two of this series of eight cases was the influenza bacillus found, and these were plated out to determine positively their character. In only one of the cases were streptococci found, and this was a fatal case, which will be described in detail. The remaining cases showed merely pus-forming staphylococci. The cases in which the influenza bacillus was found were characterized by greater severity than any of the others, and even with free drainage from the affected ears, there continued to be febrile manifestations for an unusual time, as will be hereinafter described. The staphylococcus infections were of short duration, and subsided promptly after opening of the drums of the affected ears. I shall first give synoptically a report of the two cases in which the influenza bacillus was found:

Frances M., aged two and one-half years, was

Note—I wish to express my appreciation of the valuable aid given me by Miss W. McInnis, technician in the laboratory of Dr. Marcus Haase, in working up the bacteriology of these cases.

I would not be justified in concluding that positive evidence could be arrived at from the comparatively few cases studied at this time, especially in view of the fact that there is so much divergence of opinion concerning the role played by various micro-organisms in the pathology of otitis media, and I shall continue this investigation further, in order that my conclusions may have more value.

referred to me January 25th, 1915, by Dr. E. Clay Mitchell. The child had been suffering a great deal with her left ear since the day before. She had just been through an attack of tonsillitis and of influenza, but having a steady rise of temperature every afternoon, and developing earache in the left ear, Dr. Mitchell concluded that the ear trouble was keeping up the fever.

Examination revealed congestion and bulging of the left membrana tympani. The right membrana was slightly flushed. The left drum was freely opened. Pus flowed at once, and a culture tube was inoculated at the time. The next day, the child having been complaining of the right ear, a myringotomy was done in this ear. Pus did not begin to flow therefrom until several hours later. Despite the fact that both ears were freely discharging, there continued an afternoon elevation of the temperature to in the neighborhood of 101. The influenza bacillus was isolated from the organisms grown in the culture tube which had been inoculated from the right ear. This was plated out and carefully studied. Irrigation of both ears with a sterile boric acid solution was conducted several times daily for about a week, and then dry treatment ordered. In a day or two after this the left membrana had healed, but the right ear was still discharging pus quite freely. The quotidian afternoon rise of temperature to 101 degrees continued. This ear discharged pus freely for six weeks, and then ceased, the fever having left the child several days prior to this. No other organisms than staphylococci were found associated with the influenza bacillus in this case.

Mrs. B., aged fifty, was seen by me February 14th, 1915, through the courtesy of Dr. Eugene J. Johnson. She was in the Baptist Memorial Hospital, and had been subjected to several surgical operations at Dr. Johnson's hands, and was then convalescing. For two weeks she had been having a fulness and "soreness" in the right ear. The ear was very uncomfortable, but she said that there was no actual pain. A week or ten days before she had an attack of "grippe." Examination of the affected ear showed a dully congested membrana tympani, which was bulging markedly. The other ear was normal. A free incision of the right membrana was made at once, and pus flowed in

abundance. A culture tube was inoculated, and irrigation of the ear with sterile boric acid solution ordered. Mrs. B. had at this time a temperature of 99 1-2, this being late in the afternoon. The influenza bacillus was found in the culture. This was plated out, for further study. The ear discharged pus profusely for three weeks, and there was a slight afternoon rise of temperature daily during this time.

In both of these cases the diagnosis of influenza, which had been made by the attending physicians, was confirmed through discovery of the bacillus. They ran, too, a severer and more prolonged course than is usually true of simple suppurative otitis media. This, however, may have been merely a coincidence, and is to be determined by future study of such infections. The five cases in which the bacillus influenzae was not found ran the average course of a few days to a week, and were free of fever within a few hours following myringotomy. The diagnosis of grippe, made in all these cases, was not borne out through bacteriologic study, nor by the clinical course. Furthermore, the cultures being taken so early and so carefully, there was no probability of the influenza bacillus having originally been present, and being overgrown and displaced by other organisms, as Funke believes possible. I think, however, there can be no reasonable doubt that acute purulent otitis media primarily almost invariably is monobacterial, but secondarily becomes polybacterial in character.

The next case that I shall describe is of interest, owing to its fatal outcome, showing so clearly a grave possibility in middle-ear infections, and also on account of the character of infection present.

Barbara P., aged one year, was seen by me January 21st, 1915, through the courtesy of Dr. John M. Maury. The little girl had had earache since the night before, having been ill with a form of catarrhal fever for two or three days prior to this. She had been putting her hand to the right ear, and was restless in sleep. At the time that I saw her, which was about nine o'clock in the morning, her temperature was 102 degrees F.

Examination revealed congestion of the right membrana tympani, but no bulging. The left membrana was not inflamed. Local antiphlogistic measures were prescribed, and myringo-

tomy advised, if the symptoms continued. She was seen by me again the next morning, and a restless night reported. She was apparently not in pain at this time. The temperature was 99.3-5 degrees, and the membrana tympani not so congested. At four-thirty in the afternoon, the temperature had gone to 100.1-2, and the baby was very restless. I did a myringotomy, and pus was freely discharged. A culture tube immediately was inoculated. This grew a pure culture of long-chain streptococci. January 24th, the right ear was discharging freely, but the little girl seemed restless, and was constantly putting her hand to the left ear. Examination of this ear showed a deeply congested membrana. Myringotomy was done, but no pus followed incision. On January 28th, the mother reported that the little girl seemed to have been entirely free of fever for several days, but that there had been no discharge at all from the left ear, although the right ear was still freely discharging pus. There was an angry-looking eruption extending over a considerable area of the cheek in front of the ear, evidently resulting from the action of the irritating pus. An ichthyol ointment for this condition was prescribed by me at the time. January 31st, I was asked to see the little girl again, her condition, as I was told, not being very satisfactory. When I saw her she had a temperature of 104, and was rather listless. The mother said that for two or three days the discharge of pus had checked, but had begun the day before. Dr. Maury had been attending her, and at this time had her in a hot pack. The temperature continued high, despite measures used to reduce it, and the next day, slight spinal rigidity was discovered by Dr. Maury. There was as yet no pupillary irregularity. A spinal puncture was made by Drs. Maury and E. Clay Mitchell, the latter having been called in consultation. Only a few drops of fluid were obtained, and these revealed nothing of significance. A blood count showed a leukocytosis, there being 23,600 leukocytes. The temperature that day went to 105.1-2, and at no time showed any marked decline. The following morning considerable spinal rigidity was found, with irregularity of the pupils. The temperature was then 104. That afternoon the child was trephined by Dr. Maury. There was a considerable serous discharge, the meninges be-

ing angry-looking, but no pus was found. The temperature continued high, fluctuating slightly, but death supervened the fourth day after operation.

This was a case of fulminating leptomeningitis, secondary to streptococcic infection from the middle-ear. Phillips says: "As to bacterial findings in ear discharges, the streptococcus pyogenus must be considered the most virulent and destructive to both soft and bony tissues. It is, unfortunately, also the most frequent micro-organism demonstrated in purulent middle-ear disease." In twenty-five cases of meningitis secondary to otitis media, which occurred in a series of one hundred and forty-one cases of purulent otitis media, Libman² found the streptococcus as causing more than one-half of these. It is remarkable how quickly streptococci, which are constantly present in normal throats, change type and are whipped into virulent activity in the presence of inflammation. Two years ago I saw a child of three years of age, who had been operated upon for adenoids, in whom a purulent otitis media, streptococcic in character, developed, with a secondary meningitis and death. It is practically always death in these cases.

Considerable clinical and laboratory investigation of streptococcic infections of the throat was made by me several years ago, and two articles giving the results of my observation were published at that time.³ The virulence of this organism, when it assumes pathogenic form, its destructive action upon the tissues, and its toxic manifestations in the circulatory system, especially as concerns the kidneys, were emphasized through this investigation. It is excellent routine practice, and one that I endeavor to follow, to secure a culture from all aural discharges, and where streptococci are found, the patient's condition should receive the closest attention. It is significant that in Libman's twenty-five cases of meningitis secondary to otitis media, none was purely staphylococcic. The staphylococcic infections belong

(1) Phillips—Diseases of the Nose, Throat and Ear, 1911, P. 43.

(2) Libman & Cellar—Amer. Jour. Med. So., Sept., 1909.

(3) McKinney—Streptococcic Infections of the Throat—Journal A. M. A., May 29th, 1909; Medical Record, May 7th, 1910.

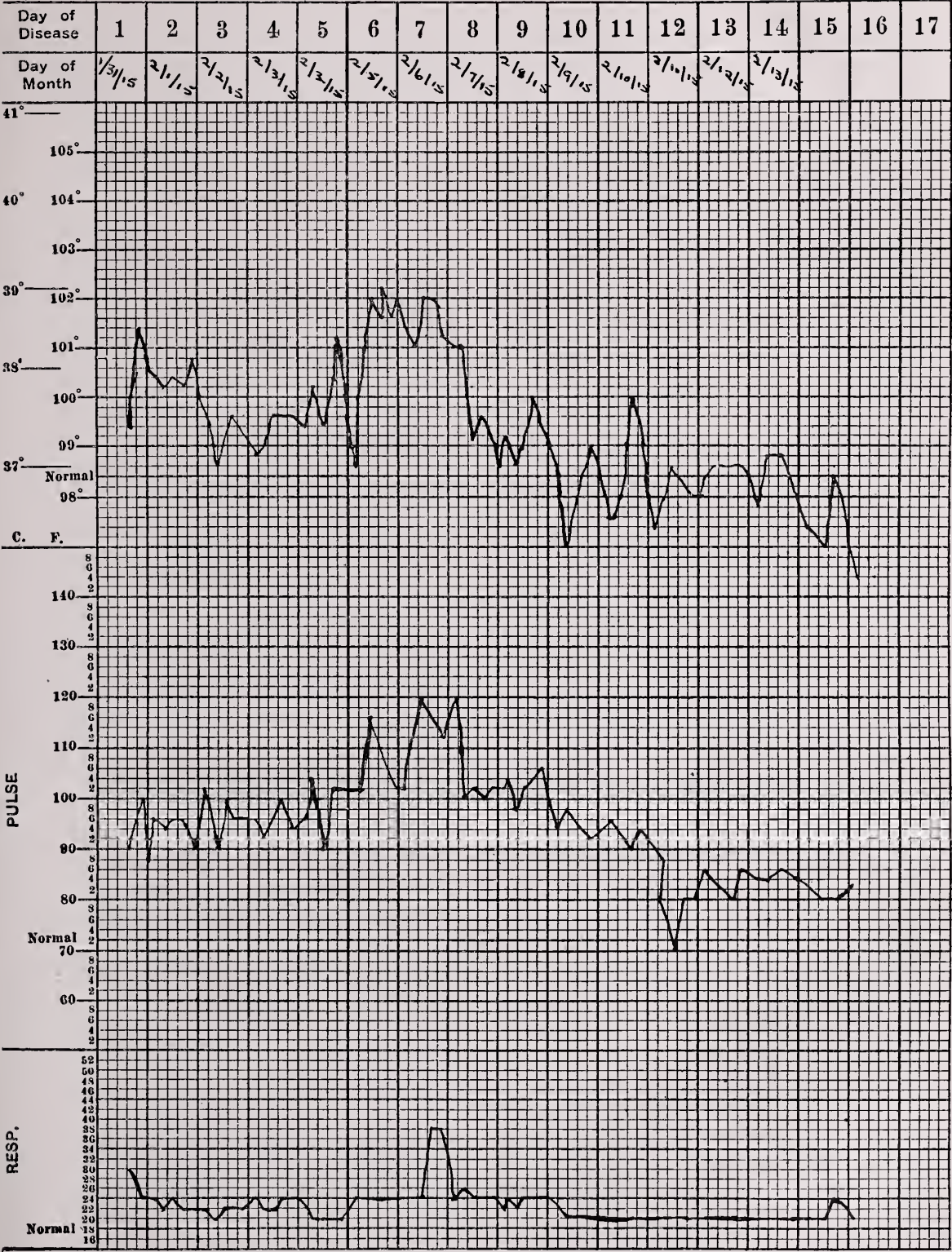
to the non-dangerous group, where as the streptococcal infections are classified with the dangerous.

When we consider the relation of the middle-ear cavity of infants and young children to the lateral sinus and the meninges, and bear in mind the fact that the cranial sutures at this period of life are still more or less open, it is remarkable that we do not have more cases of secondary meningeal infection following middle-ear abscesses, and this more than likely is due to the fact that the pus in so many of these cases is non-virulent in type. Yet Libman's statistics of twenty-five cases of secondary meningitis in one hundred and forty-one middle-ear inflammations is rather a large proportion, and to this must be added five cases of brain abscess and thirteen cases of sinus thrombosis occurring in the same series, and the streptococcus was the dominant organism found in these cases.

The last case that I am to report was one of more than passing interest to me, and is rather unusual in its various clinical aspects.

Miss J., aged 22, a pupil nurse at the City Hospital, consulted me January 30th, 1915, concerning a pain that she had been having in her left ear for several hours. She had had a slight cold preceding this, but no other symptoms. Examination of the ear showed a slightly flushed membrana tympani, especially the upper portion, the congestion extending down the handle of the malleus. There was no fever at this time. She was advised to return to the hospital, to go to bed, and to apply heat, by means of a hot-water bag, to the ear. That evening she had a temperature of 99 4-10 at six o'clock, and at ten o'clock this had risen to 101 4-10. A half grain of codein was given her hypodermically, but she had an uncomfortable night. At seven-thirty o'clock the next morning her temperature was 100 4-10, and she was still suffering somewhat with the ear. In the afternoon I saw her, and she said she thought that the ear had burst and was discharging, with some relief from pain. I could find no pus in the canal, but the membrana tympani appeared less congested. Her temperature was at this time 100 2-10. She had been given calomel, and I instructed that the ear should be irrigated with sterile boric acid

solution, hot as could be borne, every two hours. The next day the temperature was down somewhat, and it was reported that she had had a fairly comfortable night. The temperature fluctuated around 99 during the entire day. The ear gave very little pain, and she seemed to be improving. The temperature was 99 4-10 at 3 o'clock the next morning, but at 4 o'clock that afternoon it was 100 4-10. When seen by me about 4:30 o'clock, it was reported that she had had a slight chill in the afternoon. She was quite comfortable at the time that I saw her. I noticed, however, that she was beginning to develop facial paralysis of the affected side, this scarcely being perceptible except when the patient was told to close the corresponding eye. Fearing the development of a refrigeratory paralysis of the facial nerve on this side, I lanced the membrana tympani of this ear, and inflated the middle-ear. No pus followed the procedure. The hot sterile boric irrigation was continued. The next morning the temperature was 101 4-10 at 6 o'clock. When I saw her about 8:30 o'clock, I could still find no pus in the external auditory canal. The ear was feeling comfortable, but the paralysis was increasing. At 6 o'clock in the evening her temperature was 102, and she was suffering with a pain in the chest. She had not had a good day. Dr. Otis M. Warr, of the medical staff, was asked to see her. Dr. Warr found nothing of significance in the chest, but gave her analgesics. Her blood count was: total white, 15,400; polynuclears, 78 per cent; large monos, 6 per cent; small monos, 15 per cent; eosinophiles, 1 per cent; hemoglobin, 80 per cent. She was complaining of pain in the left knee joint. The temperature continued about the same the next day, and the facial paralysis steadily developing, it was determined to have a blood culture. There was no jugular nor mastoid tenderness, nor any cervical rigidity. A urinalysis was ordered, especially with a view to determining if bile was present. Aspirin, grains 5, every three hours, was ordered by Dr. Warr. At 10 o'clock the next morning the temperature was 98 6-10. Facial paralysis was marked, Miss J. being quite unable to close her left eye. The membrana tympani of this side was almost free from



congestion. There was no pus in the canal. The next day the temperature did not go over 99, but this may have been due to the influence of the aspirin. There was no pain in the ear, and the patient rested comfortably throughout the day. Two blood cultures, one made by Dr. H. T. Brooks, of the Medical Department of the University of Tennessee, and

the other by Dr. L. von Schmittou, of the City Hospital Laboratory, were negative. No bile was found in the urine, this being normal. Strychnin, 1-30 grain, every four hours, was ordered by Dr. Warr, and the aspirin stopped. On February 10th, blood count was: total white, 7,400; polys, 76 per cent; small monos, 19 per cent; large monos, 5 per cent; pain in knee joint decreased, and slight improvement in the facial paralysis was noted. The temperature was running lower, occasionally being sub-normal and normal. The facial paralysis gradually improved, and at the end of the third week was practically gone. As will be seen from the accompanying graphic temperature chart, the temperature course was very erratic throughout her illness.

The feature of this case that was so interesting was the facial paralysis, which came on without external traumatism, and without a history of purulent otitis media. These cases of facial paralysis which develop in an obscure manner are usually of the type called refrigeratory paralysis. This form of paralysis is due to an inflammation of the nerve trunk as it passes through the Fallopian canal, in the roof of the middle-ear cavity, there being evidently a dehiscence in the bony covering of the nerve. H. O. Reik, of Baltimore, in the second volume of the nineteenth series of *International Clinics*, discusses this subject most thoroughly, and reports some of his own cases. He says that in this type of paralysis there is always an intermediate subacute otitis media between the time of exposure to cold and the appearance of the palsy. He makes the point that practically all cases of refrigeratory facial paralysis are secondary to acute or subacute otitis media, and that the history of one is typical of all. It is important to bear in mind the fact that the middle-ear exudate does not discharge spontaneously through the membrana, and that about the only pronounced symptom prior to the appearance of the palsy in many of these cases may be earache. In the case just described by me I could never at any time find pus in the external auditory canal, but that pus was present in the tympanum was evident from the fever and from the leukocytosis. I am inclined to think that the

joint pain, complained of for several days by this patient, was septic in nature, the infection coming from the middle-ear cavity. The tendency of refrigeratory paralysis is to resolve of themselves, but this may require a considerable period of time, and resolution is hastened by a myringotomy, relieving the tympanum of the accumulated exudate. Whether the myringotomy done by me in this case did this I cannot definitely state, but it was done so early in the course of the trouble that I am inclined to believe the opening closed before it proved of much value. Had the paralysis continued after the patient began to show improvement in her general condition, I should have put her under ether and opened the drum freely.

This study of the manifestations of acute exudative middle-ear inflammation has been of value in demonstrating to me:

1. The so-called "grippal" otitis media very frequently does not show the presence of the influenza bacillus.

2. Where the influenza bacillus is demonstrable in the middle-ear discharge the course of the disease is likely to be longer than where the infection is merely staphylococcic, and is accompanied by severer symptoms. This conclusion, as already noted, is subject to the result of further study.

3. Where the streptococcus is found primarily in the ear discharge, the chances of serious consequences are greatly increased. This conclusion is based upon the opinions of various authorities.

4. Refrigeratory paralysis, as described by Reik and others, is a demonstrable pathological condition, and must be considered in arriving at a diagnosis in non-traumatic paralysis of the facial nerve.

DISCUSSION.

DR. HILLIARD WOOD, Nashville: I have enjoyed the very interesting paper of Dr. McKlinney upon the subject of the bacteriology of otitis media. There is a well-known difference in the virulence of various bacteria in producing otitis media as well as pathology elsewhere, the streptococcus, as he says, being the most virulent, and the staphylococcus the least virulent. There is one fact in studying the effect of infections that we too often overlook. The result of an infection depends partly upon the virulence of the infecting

organism, and partly upon a lack of resistance on the part of the patient. In other words, the result of infection depends upon the virulence of the organism and the vitality of the patient, and of these two factors I believe that the lack of resistance upon the part of the patient has more to do with the result than the virulence of the infection.

Infection with the influenza bacillus may cause otitis media. I believe it is the consensus of opinion that it is not a common cause of otitis media even in those cases that occur in so-called grippal epidemics, and even if it is the primary exciting cause, I believe it is usually associated with or supplanted by other forms of infection.

Dr. McKinney has called our attention to the well-known fact that in otitis media with streptococcus infection we have our worst cases. Those are the ones that are especially prone to have intracranial complications, which complications, as you will recall, are three in number, namely, brain abscess, sinus thrombosis, and purulent meningitis. As he has correctly said, in the reports of Libman, more than one-half of all these cerebral complications have been found in cases with streptococcic infection, so that the presence of streptococcic infection is of some importance in prognosis in that it has an evil omen, and that in this infection we more especially have cerebral complications.

I am sorry I cannot add anything especially to the doctor's very interesting paper, but I am very glad to have heard it.

DR. E. C. ELLETT, Memphis: Twelve years ago, when this Association met in this city, I read a paper on this same subject—the bacteriology of otitis media, based upon a study of forty cases. The organisms were determined by cultures after much the same technic that Dr. McKinney has spoken on. It took a little longer than ten days to get these forty cases, but I finally got them.

The results of those forty cultures were, staphylococcus, 22; pneumococcus, 4; proteus vulgaris, 1; colon bacillus, 2; streptococcus, 2. Five gave no growth, and one gave bacillus pyocyaneus. Three tubes were contaminated.

The severity of the disease was not, in this series, directly related to the supposed virulency of the germ.

The conclusion drawn in that paper was to the effect that we could not tell with any certainty from a bacteriological study which cases are and which are not liable to be accompanied by mastoid and other complications. My streptococcic cases got well without trouble. Trouble occurred in some of the other cases. We cannot foretell with any certainty from a bacteriological study which cases are liable to prove serious and run a long course and which cases are to be brief and mild.

Wendell Phillips' conclusions, as well as those of others, have been referred to. In the number of the Archives of Otolaryngology for February, 1903,

there were two papers, one from Wendell Phillips, attaching much importance to the bacteriological contents of the middle ear secretion and urging against temporarizing measures, for instance in those cases which showed streptococci in the secretion from the ear, and a second paper from Professor Bezold, of Munich, in which he stated that the attempt to divide the middle ear inflammations according to the various kinds of organisms found had been given up, and after referring to the fact that the streptococcus is found in some bad cases, it was stated that streptococci were also found in the mildest forms of otitis media after measles and scarlet fever, where the ear has been affected, in all cases of children coming to autopsy, though clinically ear diseases were not marked; that is to say, in autopsies done under these circumstances middle ear disease was found and streptococci were present in cases in which there were no symptoms during life. Since that experience, I have attached much less importance to the bacterial contents of the middle ear secretion than I previously did, and I do not usually make a culture, although I do examine a smear.

While one cannot feel as easy in mind about a case that contains streptococci as he can in a case in which the secretions contain less virulent germs, it has not been my experience that very much value in a prognostic way can be attached to the contents of the secretions from a bacteriological point of view. I say with much diffidence that this is my personal experience, because that view is not now held by the majority who have written upon the subject.

DR. GEORGE H. PRICE, Nashville: I was very glad to hear the paper by Dr. McKinney and to know that he has made investigations upon a number of these cases to determine, if possible, the infecting germ which was present.

It seems that in those cases which came under his observation, which we class as grippal infections, as proved by laboratory tests, in only two out of eight was the germ found. That was about 25 per cent. We are naturally prone, when there is an epidemic of so-called grip in a community and people are suffering from infection about the middle ear, to at once attribute the infection to the grip, and that may be the cause. Dr. McKinney did not state that the germ may not have been secured in the secretion, and that the cases may have been diagnosed and reported as cases of la grippe ordinarily.

Dr. Ellett, after having investigated some forty cases and determined the infecting agents in those cases, and after having looked up the literature in regard to the matter, does not deem it of such a great and vital matter to determine not only clinically, by microscopically and by laboratory methods, the exact infecting agent. That may be true, and it is fortunate it is true both for the patient and for the doctor, because if the doctor

was confronted continuously by the nightmare of streptococcic infection, he would rest very little. His mind would get fixed upon it and the possibilities in connection with it, but if he can come to the conclusion that streptococci may be present and the patient not be subjected to any of the conditions which might arise from the presence of such organisms, it would be a source of relief to him, yet as a rule, that is not the case. Nature seems to provide protection against the invasion of these organisms.

I have observed in the last few years that whenever pneumonia and grip are prevalent, children may develop two or three days prior to the development of symptoms in the pectoral region, trouble in the ear. I have seen quite a number who developed earache, and in a day or two after that, it was discovered they had pneumonia.

I have made it a rule to follow out the suggestions Dr. McKinney has outlined, namely, whenever I have a case of earache or inflammation of the middle ear, and I have reason to believe there is secretion in the ear and that secretion may be the cause of the increase of temperature, or the infection which produces the secretion may be, then I do not hesitate to let it out. Sometimes, as Dr. McKinney has stated, there is a flow of pus. I have observed in those cases which were followed in twenty-four to forty-eight hours by pneumonia, it was rarely the case I got pus in twenty-four hours. A little bloody serum sometimes will relieve the acute symptoms about the ear, and within twenty-four or thirty-six hours there is the appearance of pus. I recently saw a child in a family where they had measles, but this patient developed only infection of the middle ear. He developed some fever. I incised the drum membrane and had a considerable amount of bloody serum for a day or two followed by a more or less purulent secretion.

The case Dr. McKinney reported of refrigeratory paralysis was very interesting. There is only one comment I would like to make about that case, so far as treatment is concerned. Incising the drum membrane to relieve tension and other symptoms is in keeping with what I believe should have been done; but there was one thing I do not think is exactly the best agent to use, and that was the strychnia. The administration of strychnia to a patient with acute paralysis due to an inflammatory deposit around a nerve and may be some irritation of the nerve itself, is not the best, in my opinion. It would be better to wait, because these cases are almost self-limited within themselves, and if there is anything to be done it would be better to use some sorbefacient at that time, and follow with the strychnia, if necessary.

DR. JAMES P. CRAWFORD, Nashville: The paper of Dr. McKinney has been very interesting to me, especially the bacteriological findings, as it has covered all the literature on the subject with special reference to the streptococcus. I

have not been so situated as to have the majority of my cases examined for streptococci and the bacteriological condition generally. It is the general consensus of opinion that where streptococci are the etiological factor you are more liable to complication of mastoid disease, and when found would operate earlier.

The case of paralysis that he reported recalls a case I had three years ago in which the paralysis continued for two weeks. The only symptoms were paralysis and pain. There was no pus nor any indication of it. I did not do a paracentesis. I irrigated the ear with hot water. The man had pain over the mastoid, and that disappeared to a remarkable extent, so much so that I dismissed him, believing he was about well. He turned up in a few days with paralysis, and after a week or ten days I advised a mastoid operation, which was consented to. I did not find any diseased bone until I reached the antrum and curetted out a considerable amount of granulations and bloody material. The whole antrum was filled with broken-down tissue. He got relief from the pain in the ear by applying hot fomentations, and not a single time was there bulging of the drum or any indication that the drum should be opened.

It used to be my custom, when I was called in a case of inflammation of the middle ear to perforate the drum membrane at once; but on one or two occasions I delayed and used hot water (with good results), and since that time I have been using hot water. In looking over my records some time since, I found about sixty cases in which I had used hot irrigations in children from ten years old up to adults. I have not had to puncture the drum in an adult or child under ten years of age in three years, and I did nothing except to use hot water and hot packs. Only one case had to undergo a mastoid operation, and this case I am fully convinced was tuberculous. This patient was operated on about eight months ago and she still has a small wound in the region of the mastoid. I am convinced from the history and behavior of the wound she is tuberculous, and I suggested to the husband that we have a tuberculin test made, which I have been unable to have made on account of the family's circumstances.

DR. M'KINNEY (closing): I did not want you to think I had the assurance to think that an observation of this kind would be conclusive. It was simply an investigation made with reference to finding the bacillus present in these cases. I have made a great many other bacteriological examinations of ear discharges, but this work was done with a view to determining if the presence of the influenza bacillus could be demonstrated in these cases of so-called "grippal" otitis media.

As to the conclusions in this paper, take Libman and Cellar, they have done the best work on otitis media with reference to meningitis and sinus thrombosis. They place great value on the

presence of the streptococcus in the blood as demonstrated by culture, whereas Sondern, and others, believe that this should not be taken as a positive indication. There is much diversity of opinion as to results shown by bacteriologic findings in otitis media and its complications. I have drawn attention to this work to get others interested. Everything we can do in otitis media may throw light on the subject, but at present we have many opposite views.

As to the cases where the influenza bacillus was present being clinically worse than the others, giving more protracted symptoms, that may have been a coincidence, as mentioned.

I hope to be able to gather more data from further study and report on many more cases. In this study I was careful to take only those where I was sure that the cultures were uncontaminated, because we know secondary infection occurs readily after myringotomy.

As to Dr. Crawford's remarks about not puncturing the drum membrane, but relying on hot fomentations, I should be afraid to take the risk. We know from experience that complications of middle ear inflammation can be avoided if the drum membrane is opened freely and the pus allowed to drain out. I would be afraid to take the risk of meningeal or mastoid involvement in following his method. He has been fortunate in not having had more trouble of that kind.

THE DIAGNOSIS OF SYPHILIS OF THE NERVOUS SYSTEM.*

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That syphilis is the cause of many organic diseases of the nervous system is a well established fact, and that many other diseases, both organic and functional, present evidences suggestive of these, and that their clear differentiation is beset with many difficulties, is sufficient excuse for us to try to find some working basis on which to make a diagnosis.

Since the discovery of the specific micro-organism which causes syphilis, our ideas of diagnosis and the clinical pictures produced by it have been placed on a firmer basis and we are more privileged to speak in positive terms now than formerly.

Shaudinn reported the discovery of the

Treponema pallidum just ten years ago, but others had from time to time described micro-organisms in the blood and tissues of syphilitics, which had not stood the tests, so it was not till Metchnikoff and Roux further substantiated Shaudinn's discovery by inoculating lower animals with it and producing the same disease, that it was accepted as the specific cause.

In 1906 Wassermann, Neisser and Bruck brought forth what is now generally known as the "Wassermann Reaction" and which, after very thorough tests, is generally used, and by many observers thought to be the best evidence of this infection.

Efforts to cultivate this specific organism were unsuccessful till recently, when Noguchi succeeded, and from this has developed the "Luetin Test." The harmlessness of lumbar puncture having been shown, and the work of Mott on the cerebro-spinal fluids in the other trepanosome diseases, apparently allied conditions, called attention to the diagnostic aid which might be gained from this source, and it is here we find the most conclusive proof of the nature of central nervous system infections, and on this was developed the Wassermann reaction, the globulin estimation, the cytology, and the Lange colloidal gold reaction.

Within the last two years Noguchi and Moore demonstrated the spirochete in the brains of paretics and the cords of tabetics, and, in the case of the former, these have been found during life by brain puncture. This work has been confirmed by many others.

All these diagnostic measures, and more, have been developed within a comparatively short space of time, and it is not surprising that the neurologist has become enthusiastic and rather inclined to lose equilibrium in his search for this factor in all his cases, and is prone to rather disregard the older and less showy diagnostic evidences and place too much faith in the newer ones. As a result of these new laboratory methods almost all diseases of the nervous system, functional and organic, have been pretty thoroughly worked out on this basis, and it has not been without its good results, for it has drawn the

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lines quite distinctly between what is and what is not syphilitic in nature.

The effect of this infection on the nervous system varies, as it does elsewhere in the body, with the stage of its development. Early its baneful influence is spent on the surrounding, supporting and vascular elements, producing there one or a combination of several histo-pathological changes; one large or numerous small gummatous inflammations; endarteritis, endophlebitis; or a simple perivascular round cell infiltration; and in these ways the nerve tissues are either pressed on or their vascular supply interfered with, and they lose their functions and finally degenerate; it can be seen that the clinical signs produced are in reality secondary and that there is nothing specific about this attack, the symptoms being produced because these changes happen to take place in or around the nervous tissues. For this type of affection Mott has suggested the term "Interstitial Syphilis." Now there is nothing in this which is peculiar to the nervous system. It is true there are certain gross areas which are more likely to be the seat of such changes, but it cannot be said that they are limited to any one area, for they may be as widespread as the whole structure. These processes are likely to take place while the disease is symptomatically active, and occur frequently with other general manifestations.

Late in the course of the disease, or when the individual has even forgotten he has ever had an infection, the so-called para or meta-syphilitic changes occur, and in the light of our recent knowledge these are more definitely and specifically syphilitic than those we have just mentioned, for here the histo-pathologic changes seem to be those of a definite attack on the nervous elements themselves, producing a primary degeneration of the axis cylinders which is later replaced by fibrous tissue. It is true in this stage that there is a small round cell infiltration, limited largely to the smaller capillaries, and also some thickening of the surrounding structures. On account of these latter observations which were first made by Dejerine, and confirmed by others, Nonne, in a recent paper, doubts the validity of the primary parenchymatous nature of this degeneration. There have been

many theories advanced to explain the delay in the time of onset of this attack, but none so far are satisfactory, and this problem still remains unsolved. For this type of pathology Mott and others have suggested the term "Parenchymatous Syphilis," and here the areas attacked are more constantly the same and certain histologic structures seem to be quite susceptible to it.

Syphilis attacking the structures of the central nervous system produces the following clinical entities: Cerebro-spinal syphilis, (in its various forms) paresis, tabes, and primary optic atrophy; aside from these we have separate involvements of the meninges of both the brain and cord, and even the peripheral nerves. It is not well to disregard any of these terms in a classification, since they are all definite clinical pictures, and even though they may overlap, as would be natural to suppose, enough are clear cut to justify the retention of a special clinical designation; but in the use of these terms it should always be borne in mind that their fundamental basis is syphilis, and that this, while it may be in a somewhat latent state, is at the same time an active infection.

That some of these types, as paresis, tabes, and optic atrophy, follow much the same course and vary greatly from the earlier and more widespread infections in time of attack, selective action, and pathology produced, has suggested the possibility of a "lueta nervosa," for which there seem to be plausible arguments, but no definite proof.

Like the rest of the body, no portion of the nervous system is exempt from syphilitic involvement, and this structure can be involved at any time during the course of the disease after the incubative stage, to the end of the life of the individual.

The relative frequency with which syphilis attacks the nervous system in its supporting and vascular structures, is variously estimated. Compiling some of these, it appears to be found in from one to three per cent of all cases, and Fournier states that in those who have tertiary symptoms, as many as twenty per cent show nervous system involvement. Wile and Stokes of Ann Arbor, in two papers published in the last few months, claim to have shown that probably every case of syphilis which reaches the secondary stage, has more or less involve-

ment of the cerebro-spinal axis. And Wechelmann says that all cases, even in the primary stage, show evidences of the attack here. As conclusive as these contentions are to the minds of these workers, they do not conform to any ideas we have of this condition. If true, it does not produce lasting effects, or our therapeutic measures are more effective than we suppose, or else we would find nervous syphilis more common. But this work does emphasize a fact, usually forgotten, that nervous symptoms are often quickly produced by this infection.

As to the frequency of attack on the nervous elements themselves (paresis and tabes) no figures are at all reliable, for other factors enter into the calculations, as race, station in life, etc., producing a remarkably large or small percentage.

Of the former group meningitis is the most common picture, and it is also probably a part of most other involvements. Strange as it may seem, Church says the first year shows the greatest number of attacks on this structure, especially the spinal, the cerebral developing slightly later. In the latter group the clinical evidences appear after a longer period has elapsed since the primary infection, usually about ten years; but there are well authenticated cases which have developed in three years (Mott), and Byron Bramwell records one which developed in ten months.

With this knowledge of the variable nature of the etiology and pathology of this infection of the nervous system, the clinical evidences of its presence are of necessity most bizarre, and a detailed account of them would be tedious and, for our purpose, of little value; therefore only the most characteristic will be discussed.

Fortunately, for a clinical diagnosis, certain areas of the central nervous system are more liable to attack than others, and we look to these to guide us in arriving at a conclusion; but, as Weisenberg says, these simply represent a seat of the infection and by no means its extent. Probably the most common site is in, or near, the cranial nerves, and of these the oculo-motor apparatus is most commonly attacked. Irregular, uneven, or inactive pupils should always be regarded as suspicious signs. The Argyle-

Robertson pupil, whether the lesion producing it lies in the Edinger-Westphal nucleus or in the ciliary ganglion, is the most positive clinical sign of syphilis of the central nervous system. It is true some reliable observers have related its presence in other diseases, and there is no valid reason why it could not be produced by other causes. The weight of the preponderant number of cases in which it has been found, and its conspicuous absence in other diseases, leads us to assume that it is almost pathognomonic of syphilitic infection, and in those cases in which its presence has been demonstrated which were due to other etiology, no conclusive proof has been shown that the patient could not also have been the host of syphilis. This sign is more often found in those cases in which the pathology is located in the parenchyma of the nervous system, the so-called parasyphilis, but it may be present also quite early and in the cases in which the supporting structure is the seat of change.

Transient or permanent palsies of one or more ocular muscles is common, but has no definite diagnostic value, unless accompanied with other negative or positive qualifications.

Clinically also the history of the individual is of aid. A positive history of a syphilitic infection, treated or untreated, lends weight to the diagnosis; but a word of caution is needed here. Simply because an individual has had this disease does not prove that all else which may develop in his lifetime is of necessity syphilitic; but it must be granted that in view of our more recent pathological reports that it is at least presumptive evidence. On the other hand, it is well known that a negative history carries no diagnostic significance.

The age of the patient who presents evidences of structural changes in his nervous system, should be considered carefully; in a young individual who presents these changes syphilis with its arterial damage is a most frequent cause.

Epileptiform attacks, beginning after the thirtieth year, should arouse our suspicion as to the possibility of their syphilitic origin and make us search very carefully for further evidences. The same can be said of apoplectiform seizures before fifty. Fugaceous palsies

anywhere in the body, as well as in the ocular muscles, and transient aphasia are suggestive. Multiplicity of symptoms, indicating a widespread distribution of pathology, and especially lesions of the cranial nerves, are all probably syphilitic in origin.

The clinical evidences of paresis and tabes are too well known to require a detailed account, and when these are found they should be considered as evidence of syphilis. In the former the picture may be first psychic or somatic, or a combination of both, and it is only in the last case that we are justified in making a diagnosis on clinical grounds alone. It is in the atypical cases that doubt arises, and all the assistance we can get should be sought. Even in those in which the clinical picture is perfect we should confirm it by all the laboratory tests, not alone for diagnosis, but because they are our best guide in determining what effect our treatment is having.

In tabes errors in diagnosis are oftenest caused by improper or incomplete examination of the patient. Monosymptomatic tabes is a rare picture, and other conditions presenting two or more tabetic signs are fairly easy of differentiation, but the laboratory tests are even more important on therapeutic grounds here than they are in paresis.

The luetin test is of value to us only in a general way; it should be specific, and it may be interpreted as indicating, when positive, a syphilitic infection, but in no way incriminating the nervous tissues as its seat. So it might be said to be one of a number of confirmatory evidences.

The older method of applying a therapeutic test to suspicious cases is unscientific and too often misleading.

From the laboratory we have the procedures mentioned earlier in this paper; the Wassermann of the blood, Wassermann of the spinal fluid, cytology of the spinal fluid, the globulin estimation, and the Lange test.

There has been no test introduced in medicine which has created more interest and been so universally accepted as the Wassermann test, and yet strictly speaking, it is not specific, and is so elaborate and difficult of performance that even now, in its almost universal use, we frequently receive contradictory reports from different serologists on the

same patient; but granting that they agree, what are we to conclude in a diagnostic way from it? As was above said of the luetin test, this is a general indicator and in no way designates the nervous system, and therefore must be of a confirmatory nature. This reaction, however, applied to the spinal fluid should be more definite. Granting its specific nature, and given a reliable serologist, then a positive Wassermann of this substance should mean some involvement of the central nervous system. On the other hand, a negative report, as is the case with the blood, has no value. We will not discuss here the quantitative reports sent to the clinicians by the serologists; many different terms as to the amount of haemolysis which takes place are used, as four plus, two plus, plus minus, and the like, which are quite confusing, and some standard should be decided on and adhered to, so that we can draw conclusions which are of value. These so-called "faint" or "doubtful" reactions are confusing to the clinician.

There is nothing specific or definite from the syphilitic standpoint about the globulin excess in the spinal fluid. It can be just as easily produced by many other changes going on in the brain and cord. Out of this grew the Lange colloidal gold test, another elaborate and intricate procedure, which has been much used since its introduction three years ago. Its object was to supply a specific test, but its foundation in this direction is not good and, while many workers put great faith in it, it is open to just criticism, but may add some weight in a diagnostic way.

Probably the most constant feature is the lymphocytosis of the spinal fluid. The same criticism can be made of this as of the others, that it is not specific; but of all of them, it is more uniformly present and its suggestion of central nervous system involvement, especially of the meninges, is more positive than probably any other. The number of cells varies in the different clinical types, but they do not vary within constant enough limits, to be diagnostic of these types unsupported by other evidence.

The same general objection can be applied to all the above laboratory tests, either they are not specific of nervous tissue involvement or

they are not conclusive proof of the syphilitic nature of the disease. So we conclude that we have no pathognomonic sign of syphilis of the nervous system. Clinically the Argyle-Robertson pupil stands first, and in the laboratory the spinal fluid examination, and in this the lymphocytosis seems to be the most reliable sign. We should not put all our dependence in either the clinical examination or the laboratory report, but should combine them and give each a careful analysis.

Nowadays with all the newer laboratory methods, and with a tendency to depend altogether on the laboratory, we are liable to be led to minimize the importance of clinical signs; but, it is the opinion of the writer that they are of equal if not greater importance in diagnosis than the laboratory.

We all see cases, every year, in which these evidences conflict, as a tabetic with no laboratory proof, but well-marked clinical signs; or a cerebro-spinal type with practically no clinical signs and positive laboratory findings; these apparent conflicts are not uncommonly encountered, and are confusing, but if kept under observation will sooner or later be harmonized.

Finally, in making a diagnosis of syphilis of the nervous system it should be remembered, that syphilis can attack this structure at any time in the individual's life after the primary infection. And that the so-called para- and meta-syphilitic diseases are in reality active syphilis, and a diagnosis of them means fundamentally syphilis. And in arraigning our diagnostic data the clinical evidence must be given equal, if not greater, weight than that obtained from the laboratory.

DISCUSSION.

DR. IRVING SIMONS, Nashville: The most important thing for the patient in these various conditions enumerated by the essayist is what can be done for him? Within the last few years Drs. Swift and Ellis, of the Rockefeller Institute, have devised a treatment with which you are all familiar. This treatment consists in the injection of salvarsanized serum into the spinal canal. The serum is obtained from the patient, the neosalvarsan being introduced intravenously and blood withdrawn and clotted and the serum diluted to a suitable dilution and injected into the spinal canal.

During the last year and a half I have been interested in this subject and have carried out twenty-seven of these treatments in various types

of syphilitic, so-called para-syphilitic, and in some cases of non-syphilitic disease.

These cases cannot be reported in detail, but the chief thing I want to bring out is what happened to the patients—that is what we have learned in regard to their improvement. In the first group I had five cases of general paresis. The first case of paresis had six treatments. The Wassermann in the blood was not changed at all, in other words, a condition of the Wassermann fastness. The spinal fluid became normal practically. The Wassermann in the spinal fluid became negative, the cell count fell rapidly, the globulin (Nonne) and gold chlorid test persisted strongly. This patient showed absolutely no clinical improvement; he is at present in one of the local institutions for the insane.

The second case of paresis that started with hemiplegia, having been preceded by some slight mental symptoms, showed marked improvement. This improvement lasted for a number of months, was followed by another hemiplegia, and recently I learned the patient has died.

To the next case of paresis I may add a third and fourth case of clinically absolute paresis, the blood and spinal fluid agreeing. These cases were treated and showed no improvement.

The fifth case of paresis gave a history of hemiplegia. In this case one Swift-Ellis treatment was followed by a series of severe convulsions with a hemiplegia. The hemiplegia cleared up, the patient went along for six or eight months, no further Swift-Ellis treatment was given on account of the fear that it might cause the condition to recur. This patient has since died, so that the outlook from these cases of paresis is by no means good.

A case of tabo-apresis in a woman showing some mental symptoms, paralysis of right third nerve symptoms, classical of tabes was given five treatments. She showed marked improvement—in fact was able to leave the institution and go away. I have since learned she died in another institution seven months after she passed from under my observation. Her symptoms I attributed to brain syphilis, which were not unlike those of tumor of the brain.

There were two cases of tabes, and in both of these I got marked improvement. They were both private cases and received care in the home. The patients had the typical symptoms, one of them having a perforating ulcer of the foot. He suffered chiefly from lightning-like pains and was markedly improved under the treatment. He has been able to go about his work. The other was so ataxic that he was confined to bed. He is now working as a traveling salesman.

Of the other cases, five in number, all of which proved to be non-syphilitic at least so far as the nervous system was concerned, the following was noted:

1. A case of giant tumor of the cauda equina

(glio sarcoma) showed remarkable temporary improvement but afterward died.

2. A case of intra-medullary glioma of the dorsal cord succumbed to nephritis and pneumonia. I attributed this to the effect of the neosalvarsan.

3. A case of lues in which the blood and spinal fluid were negative received one treatment with no effect.

4. A case of pellagra with nervous symptoms received one treatment with no effect. He afterward died.

5. A case of Charcots Disease (amyotrophic lateralsclerosis) was markedly improved by one treatment.

Of the entire number of cases which received in all twenty-seven treatments only one succumbed to salvarsan nephritis and this was a non-luetic case.

DR. J. W. M'QUILLAN, Chattanooga: I very much regret that I am not a man of such accurate observation and with such an armamentarium as never to make a mistake; but I am a great man for cases, and this paper reminds me of a case I have under observation at the present time. I find one thing in the average syphilitic which is always accompanied by a disease that is just as serious as the syphilis itself and harder to eradicate. I refer to syphilophobia. Most syphilitics are syphilophobiacs.

I am observing now a patient, thirty-five years of age, who had syphilis twenty years. He was treated thoroughly. He is married, and has three healthy children. Under a financial depression and one thing after another, and an attack of la grippe, he has lost a little of his robustness and concluded that all his misfortunes in the world were due to the primary syphilitic infection. He has been treated. He has been salvarsanized, mercurialized, taken to Hot Springs and given the classic treatment, but he came to me with a typical case of psychoneurosis. He wished me to examine him very carefully. I did so and could find not a single thing which I could attribute to that infection.

With reference to examining the pupils, we have to be very careful about that. The practitioner who does not examine the pupils with a magnifying glass is missing a great aid in diagnosis. Looking a man in the eye and examining his pupils is not worth much. I always use a glass so that I can get five or six diameters of magnification. I thought he had a rather sluggish pupil, and that possibly the reflex to light and accommodation were not exactly right. Then I began to examine a number of similar cases and found that no two patients' pupils react alike to light and accommodation. This man was never satisfied, and I watched his case very closely. He went to another physician, who said he was suffering from the effects of syphilis. He put the patient upon treatment, and of course the man

felt better. In the first place, it relieved his mind in making a positive diagnosis and predicting improvement. He came back at the end of six months feeling better, but a month after that he was worse, then he went to another practitioner, an irregular, who mercurialized him. He came back to me with a bad stomatitis and in a bad condition generally from mercurialization. That condition having cleared up, he comes back to me again, and subsequently goes to an irregular practitioner who was not a graduate of medicine. The account the patient gave of his examination to me was ridiculous. He went to the office of the practitioner and said that he had had syphilis, and the practitioner said, "Stand right there, put your heels together, shut your eyes," and then he asked the patient if he did not feel a little bit wobbly, and the patient replied, "I believe I do." The patient was then asked to touch his nose with the tip of his index finger, and as he was under a nervous strain he made an attempt to do so and touched the opposite ear. The practitioner exclaimed, "My God, you have got it." That patient is on the verge of insanity. When you have a case to treat like that the thing to do is to observe it closely for a while and allay emotionalism. I believe that in such a case if we are successful in dissipating the psychoneurosis it will be the means of clearing up the man's syphilis. There is no use in treating such a case except to get rid of the nervousness which will in the end destroy him. But with a Wassermann test absolutely negative and a resolute hold on the patient we often succeed.

DR. HERMAN SPITZ, Nashville: The paper of Dr. Harris is a very timely one, as the diagnosis of syphilitic affections of the cerebro-spinal system is exceedingly interesting. As Dr. Harris has pointed out, there are four or five tests which are used in the laboratory for diagnostic purposes, none of which are absolutely reliable individually, when you get a negative report as regards the Wassermann test in the serum or the fluid, or a positive report of the globulin, the lymphocyte count or the Lange's gold test. They must be considered together.

We may get a patient who gives an indefinite history of having syphilis. He suspects he had it. The majority of physicians say the laboratory diagnostician has no business whatever in knowing the history of a patient. The practitioner simply sends to the laboratory serum or cerebro-spinal fluid and asks for a report. The laboratory man sends back a report that is negative or positive, or one or two or three plus, and that is the last he hears of the case; but if physicians would send us the history, there is no doubt but that the laboratory diagnostician could work with much more light and information with the substance in hand. Personally, I think laboratory men should know the history and work in combination with the man who has charge of the

case. In a given case if the serum Wassermann be negative, the cerebro-spinal fluid should be examined, not alone for the Wassermann, but also for globulins and the presence of cells. The lymphocyte count may be high. This is the most characteristic feature in syphilitic affections of the cerebro-spinal system, namely, a high lymphocyte count.

I recall a case in connection with Dr. Harris in which we got a negative Wassermann repeatedly. The lymphocyte count remained relatively high; the globulin test was positive. That patient has received treatment and I believe has improved.

I recall another case in which the fluid and the serum were examined repeatedly with negative results pertaining to the Wassermann, showing a persistent high lymphocyte count and high globulins; this patient has improved very markedly under treatment. This man's Wassermann, after a second Swift and Ellis injection, was positive in the cerebro-spinal fluid. The serum remained negative. His lymphocyte count, which was 180 the first time it was taken, has gradually decreased until at the last count there were only forty-eight cells with practically no globulin and a negative Wassermann. So the laboratory features in the examination of these cases are important not only for a diagnosis of the condition, but also in determining what effect and what results you are getting by treatment.

I might say that in both of the cases which I have described the clinical symptoms were characteristic; that the laboratory side was partly negative.

DR. HARRIS (closing): I wish to thank the gentlemen for their discussion, and in reference to what Dr. McQuillan has said, I want to emphasize the point he brought out. We cannot be too careful in our examination of the pupils. Taking the patient, as he has said, and exposing his eyes to light, or flashing a light in them, is not a complete examination of the pupils. We must employ the diagnostic measure we have toward determining whether the pupils are normal or abnormal. The type of case he reported is a case in which a laboratory test is the main thing. If we can be positive in our minds, even though we find no clinical signs, the laboratory will be of help to us, and we can approach the patient with more assurance than without its aid. We should examine by every laboratory method the blood and the spinal fluid.

I did not go into the treatment of the condition, but since it has been mentioned, I will say a few words about it. We began the treatment with the Swift-Ellis plan about eighteen months ago, and our results are not quite ready to be reported. The first thing of importance in these cases is to make a diagnosis. I for one do not believe in treating non-syphilitic conditions by a method that is supposed and was originally intended to be directed to a specific infection. I

do not think we do the method or the patient justice by treating him unless we are positive of his syphilitic infection.

TUBERCULOUS MENINGITIS.*

K. S. Howlett, M.D.,
Franklin, Tenn.

From the orthodox text-book description of tuberculous meningitis, the diagnosis seems easy. My own experience, however, teaches the opposite. In the few cases in adults which have occurred in my work the diagnosis has not been made in any one of them until the pressure symptoms and mental dullness of the later stages have manifested themselves, thereby making the diagnosis apparent; on the other hand, tuberculous meningitis has often been suspected when the later developments and ultimate recovery demonstrated a disease very much less grave.

I am consoled in this to some extent by having observed the same thing in the work of my fellow practitioners, who practice medicine under the same restrictions and limitations; namely, that of an ordinary country practice.

In analyzing the symptoms as they present themselves in the case which I am attempting to report in this paper, I must acknowledge that the error in diagnosis seems almost inexcusable; however, as we learn more from, and to a lesser extent teach others more by our failures than our successes, I cheerfully report this case, hoping that some will profit by my error.

Report of Case.

Sadie Davis, colored, female, school teacher, aged 24 years. Family history, good; father, mother, one sister and two brothers living and well. No tuberculous or specific history obtainable.

Personal history: Twice married; separated from both husbands, but living with second husband at this time. Had menstruated twice, but very slightly in early girlhood, since which time had complete amenorrhoea, with no perceptible monthly disturbance therefrom. Previous pelvic examination, however, had shown

*Read at meeting of Tennessee State Medical Association, Nashville, April, 1915.

a sharply retro-flexed rather small uterus, firmly fixed in its position. As a result of this, probably, she had constant backache, frequent but not very severe headaches and mild nervous or hysterical spells. She had had no illness for years severe enough to put her in bed or keep her from her school work, except an attack of malaria in September, 1914, of typical tertian variety, which was speedily cured by quinine. During this attack her temperature ran high after the chills, of which she had two, the patient becoming very nervous, with an hysterical delirium. She also developed a most profuse and irritating urticaria, covering her entire body, which readily disappeared, however, when the quinine was discontinued.

In the present illness the patient became sick while at school, on January 22, with severe headache, followed by a chill. Headache continued unabated during the night and next day when she was seen by a colored physician, who made a diagnosis of la grippe and gave her some headache and some cold tablets. She was seen on the next day by my associate, Dr. J. O. Walker. Patient nauseated and vomiting and said she had had a chill. Temperature 101, pulse 110, no catarrhal symptoms or evidences of involvement of the air passages. Complained of severe pain in head and back of neck and would cry out on any movement of body or limbs. Cerebro-spinal meningitis was suspected, but the head was easily flexed on the body and there was no demonstrable rigidity of neck or limbs, and Kernig's sign was absent. Complained of photophobia and blindness, and, in view of the subsequent developments, probably the most significant and certainly the most striking feature presented during these first few days was the eye symptoms. The pupils were uniformly contracted and reacted sluggishly to light. (By the way, I suppose every practitioner with colored patients has noticed how difficult it is to get a line on this symptom in the negro on account of the sameness in color of the pupil and iris in this race.) The eyes looked dead and expressionless, would deviate far to the right or left and remain in a fixed and unresponsive stare, even while answering questions intelligently, until the patient's attention was sharply attracted and she was told to look in some other direction. While she would say that she could not see and apparent-

ly would fail to see a glass or spoon when drink or medicine was offered her, yet she could readily count fingers and distinguish and name articles held up before her eyes. She had pronounced tremor and twitching of muscles and all sorts of irregular contractions of the limbs and facial contortions. Two or three times she had what the attendants called convulsions, though she never lost consciousness and never bit her tongue or injured herself in any way. The tongue was foul, but was easily cleaned, though it would quickly become coated again. She had from the beginning complete anorexia, which persisted throughout her illness and with this, obstinate constipation. The distressing nausea and vomiting disappeared after four or five days, though the stomach was easily upset by medicine or even food, when pushed, throughout the illness. On account of the every-other-day chill, and on account of the previous attack of malaria a blood test was made by Dr. Walker to determine the presence of malaria. The plasmodium was absent, however, and haemoglobin 85. A leucocyte count was not made, but judging from the number of white-blood corpuscles in the field under the microscope it was estimated to be about normal.

After four or five days the symptoms gradually became better, the headaches subsided, but did not entirely disappear. The patient was much quieter and seemingly slept, though she would never acknowledge this. The mental condition became more normal, though she continued to have mild nervous or hysterical explosions. The temperature dropped to 99 or less, though it never went to normal. Pulse 100 or below. This condition continued for about ten days, the patient getting no worse and little, if any, better. She took nourishment only when urged and when this was pushed too far would frequently become nauseated and vomit. During this time she was moved, by her own request, to her mother's home. It was noticeable that she always manifested her most distressing and alarming symptoms when several persons were present, and especially in the presence of her mother, who was very sympathetic, and that she was much quieter under the management of one certain attendant, who seemed to exercise a more decided controlling influence over her than any

of the other attendants. Facial expression, the response of the pupils, in fact, all the symptoms seemed to show improvement during these ten days; and we were led to make a diagnosis, with considerable mental reservation, however, of hysteria, and the family was assured, in the presence of the patient, that she was not very dangerously sick and that her ultimate recovery was sure. The treatment, in addition to this suggestive therapy, was a complete rest cure as could be obtained under the surroundings, forced feeding and anti-spasmodic remedies, bromides, valerian, apomorphia, etc.

The effect of none of these remedies was satisfactory, and not withstanding all the power of suggestion that could be brought to bear on the patient, there was no continuous or satisfactory improvement, and both family and physician were becoming discouraged, when on the morning of the sixteenth day of her illness, the physician was informed that the patient could not swallow and became violently strangled upon attempting to do so. Inspection showed the lids drooped and the eyes crossed, fixed, dull and expressionless, distorted and distressed facial appearance. The mental condition was dull and irrational and she understood what was said to her poorly or not at all. She was constantly spitting and there was an accumulation of saliva in her mouth which would often strangle her, causing a nervous strangling cough, very much exaggerated when she tried to swallow. During the day kidneys acted involuntarily and it became practically impossible to move the bowels. The mental faculties rapidly grew worse and became profoundly obtunded. The spinal symptoms were still absent or very slight. Kernig's sign could not be demonstrated and there was little or no muscular rigidity. A leucocyte count at this time showed a count of twenty-five thousand. Dr. A. W. Harris, of Nashville, saw her with us on the following morning and suspecting spinal meningitis made a spinal puncture. The fluid obtained escaped apparently under considerable pressure, but was perfectly clear. No relief was obtained from this. The patient weakened rapidly, went into a stupor and died on the next morning, the eighteenth day of her illness. The spinal fluid obtained was sent to the Vanderbilt Laboratory, and Dr. Litterer reported his finding entirely negative. No

meningococcus, streptococcus, or Pfeiffer's bacillus present, and Wasserman negative. Fluid entirely normal, except a positive increase in the number of cells present. Some guinea pigs were inoculated with the fluid, however, which afterwards were found to have developed tuberculosis, thereby proving the tuberculous nature of the disease. Every effort was made to obtain a post-mortem, but without success.

The noticeable features of this case are: First, the sudden onset without prodroma in an adult with previous good health. Second, the absence of any demonstrable tuberculous lesion in any part of the system, or of any previous indications of tuberculosis. Third, the subsidence and almost complete disappearance of the meningeal symptoms after the first four or five days, and the continued suppression and abeyance of these symptoms for a week or ten days. Fourth, the sudden re-appearance of these symptoms with indications of exudation and pressure, and the rapid decline and death which supervened.

DISCUSSION.

DR. HAZLE PADGETT, Nashville: The subject of meningitis is too extensive to be discussed in a general way, and therefore I shall limit my remarks to a discussion of the subject of tubercular meningitis. There is a well-fixed opinion, based upon the pathology of the disease, that tubercular meningitis is always fatal. Whenever we see a patient in whom we have made a diagnosis of tubercular meningitis we feel our hands are tied, and that the end is necessarily a fatal one. From a personal standpoint, based upon a long course of study and practical investigation of the various forms of the meningitides in various large hospitals of America, and also in England and Germany and Austria, where I have had unusual opportunity for such work, I have never yet made an autopsy or observed a patient in whose case the diagnosis of tubercular meningitis was made, in which recovery has happened, and I have never seen a lesion that I could interpret in the most remote way, microscopic or macroscopic, as being tuberculous that had healed. So from a personal standpoint whenever I see a case of tubercular meningitis and have made that diagnosis, I feel that the end is a fatal one and cannot offer any encouragement or hope of ultimate recovery or improvement.

I was much interested in Dr. Howlett's paper because it was a profound study of this phase of meningitis. We have often a meningitis—I am not speaking of the specific cause of it—that

comes and takes a number of days for it to recover. During that interval, with or without treatment, the patient may show mental or cerebral improvement, and then lapse into unconsciousness and mental stupor, and then as the hours or days go by certain peripheral or muscular palsies or paralysis develops, especially facial paralysis, and one arm and the opposite leg may be involved, or a certain group of muscles, and from the history of the case you think this is a tubercular meningitic coming to autopsy, but often I have examined the nervous system of such patients, and the cerebro-spinal axes, and from a clinical standpoint, instead of it being tubercular meningitis, it proved to be some other infection. So we must not overlook the fact that in the clinical study of meningitis that there are slowly developing inflammations that run an irregular course, not fulminating in their effects, that will become irregular, mentality diminishes and stupor comes, and paralyzes of various kinds creep in here and there, making a clinical picture that is impressive or tubercular meningitic, although it is possible for it to be some other infectious disease.

In this day and time, when we have the spinal puncture, can remove some fluid, do experimental work, and the like of that, we have a little better opportunity to discover the specificity of the meningitis than we had up to a few years ago. Of course, in every suspected case of meningitis a spinal puncture should be made, if the attending physician can do it and the cerebro-spinal fluid should be examined, and if in doubt as to the nature of it serum should be used. I say this from the fact that we often imagine and we have been led to believe in that type of cerebro-spinal meningitis we must have involvement of the meninges of the spinal cord from the brain down. This is an erroneous idea. I have seen time and again, as proven by autopsy and bacteriological examinations, that the brunt of the inflammation and the morbid changes are spent entirely upon the cerebral or cranial cavity, and no infection whatever ever reaches the meningeal tract from the foramen magnum down through the length of the spinal cord, and one can readily see how it is possible to fall into an error from the fact that we have an absence of lesions or clinical symptoms, or any muscular disturbance that points to the spinal cord indicative of tubercular meningitis, when we have overlooked the fact that it is the cerebral type, pure and simple, of cerebro-spinal meningitis.

DR. WILLIAM KRAUSS, Memphis: There is one thing in Dr. Howlett's paper that impresses me very forcibly, and that is the accidental history of typical tertian malaria. I do not know how many cases of tuberculosis I have had to pass upon in my lifetime that were treated for malaria. It is remarkable how many cases of

disseminated tuberculosis will give you the typical third day chills.

Another point is with respect to the examination of the blood and the determination of the absence of malaria from the absence of the finding of the parasites in the blood. That is an important practical point as we can show from statistics gathered from the canal zone. James tells me that in 50 per cent of the cases of estivo-attummal malaria of the canal zone they were not able to determine by an ordinary blood examination the presence of any malarial parasites, and could not be reasonably sure of the diagnosis until they began to use the thick film method, then the percentages became slightly better, leaving still a large margin of cases that could not be anything but malaria in which the parasite was not found. Therefore, the absence of findings would not speak against malaria. On the other hand, the presence of typical tertian organisms could not exclude tuberculosis. Many cases are dosed month in and month out, when they are really cases of disseminated tuberculosis.

DR. WILLIAM LITTERER, Nashville: I wish to say a word or two with reference to the examination of the spinal fluid. In this case I took pains in running over the various tests, viz: (1) the globulin, (2) albumin, (3) estimating the cell count, and (4) making the Lange's, and (5) Wassermann's test. Everything was negative except there was an increase in the leucocytes, about twenty in number. Such findings were suspicious of tuberculosis. The Martha Woolstein method of examining for tubercle bacilli in spinal fluid was next resorted to because according to this author you can demonstrate the tubercle bacilli in quite a high per cent of cases. This was done with negative results. However, guinea pig inoculations proved unmistakably tuberculosis. We felt sure that the case was one of tuberculous meningitis, not only from the clinical standpoint but from the laboratory findings.

DR. HOWLETT (closing): A point in this case which bothered us most, and which bothered me particularly, is the fact that the symptoms subsided so positively and markedly after four or five days. During this time we considered a great many things. We thought of abscess of the brain, but a careful examination of the ears and sinuses showed no cause for the condition, and then a blood examination at that time rather precluded it. Then malaria was eliminated to a great extent by the examination of the blood, but still I hardly know how to account for the fact of the acute symptoms which lasted four or five days, then subsided so promptly, and remained in abeyance for ten days, and then pressure symptoms, symptoms of exudation, or the presence of tubercle on the nerves roots suddenly appeared within one night. That was the special point that impressed me in the case, and I had hoped there would be more discussion on that phase of the case.

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EDITORIALS**WHY NOT BE THOROUGH?**

What's worth doing is worth doing right, and nowhere do right methods count for more than in the practice of medicine. There are too many slipshod diagnoses made by men who could do better, and treatment is too often instituted without any diagnosis.

A diagnosis based upon the pulse rate and the appearance of the tongue is not a diagnosis, but an unwarranted guess. A line of treatment based upon indications pointed to by one or two outstanding symptoms is not a medical treatment, but unwarranted deception. That's the method of the "Indian Doctor." He feels the pulse and looks at the tongue, calls it "buncum carbitis," gives the patient a bottle of his one medicine—and naturally so. Any man, even though he has an M. D. and really knows or has known medicine, will degenerate into a one-remedy doctor if he resorts to a pulse-and-tongue method of making a diagnosis.

If one watches the methods of men who have climbed to the top in medicine he will find in nearly every instance that these men do nothing and say nothing in any case until a diagnosis is made. Their first care is to get a case history—a real history, not just a jumble of words—and they study and dissect and weigh the statements which are made a part of this history, looking for defects in the chain, connecting links that fit and hold and discarding those that are weak and worthless. Then they file away this case history for future study in connection with other like histories in other cases, and for possible future reference in connection with the same case.

After the history taking comes the physical examination of the patient—a sure-enough physical examination and not merely a pulse-feeling and tongue-looking. Inspection, pal-

pation, percussion, auscultation, all are practiced by the men at the top. A history of headache may mean several things to these men; a history of vaginal discharge calls for a vaginal examination with them; a history of dizziness leads them to apply an accurate method for determining blood pressure—no trusting to the finger on the pulse with them; a quickened respiration and an harassing cough leads these men to go over the exposed chest—no material accumulation of pleuritic fluid gets by them. These top-of-the-pile fellows don't hesitate, either, to call in some one else to apply diagnostic methods which they themselves cannot intelligently and effectually use; in fact, they recognize and admit their limitations much more readily than does the tongue-and-pulse doctor, and they are not nearly so much afraid of "I don't know" as is the self-confident and self-important gentleman who thinks with his index finger and trusts the fur or lack of fur on the tongue for guidance.

The most ridiculous being in the world is the doctor who, when he himself gets sick, hones and frets for a thorough examination and a well-founded diagnosis in his own case, and who, when he is well, feels his patient's pulse, looks at his tongue, measures out a supposed five grains of phenacetin and a guessed-at three grains of calomel on the point of the same knife blade that cleans his nails, picks his teeth and cuts his tobacco, and then takes his fee under the pretext that he has rendered "professional service." We have some of his kind.

There is another class who do better, but don't do their best. These take a poor case history and make incomplete and unthorough examinations. Some of these are fairly successful and manage to hold the respect of a certain class of patients, but they don't help much to uphold the honor and dignity of the profession nor do they add any very material amount to the sum total of human happiness.

The third class are the top men, men who are careful, thorough and conscientious in their every relation to their patients and to their profession. There are more of them in Tennessee this year than there were last year, and there will be more next year than this. Their example is telling, **and they all belong**

to their county medical societies. Had you noticed that?

ANTITYPHOID VACCINATION.

The man who would inveigh against the employment of vaccine as a prophylactic for typhoid fever would be promptly labeled as stupid. He would be no more justly entitled to condemnation, however, than that one who unhesitatingly and unqualifiedly urges vaccination as a most positive preventive.

There can be no doubt as to the value of vaccination against typhoid, nor can it be denied that its use has many times failed in its intended purpose. In this matter, as in every other, there is a sane position to be assumed and a safe method of statement to be pursued. Many valuable preventive measures have had their fields of usefulness sadly limited by the chronic opposer, but more of them, in all probability, have been hampered and restricted in their fields of usefulness by over-enthusiastic commendation as agents of absolute preventive potency.

There is no way to get round the positive evidence of the prophylactic value of antityphoid vaccination in the armies of the nations and elsewhere. The man who advances this evidence as his sole or principal argument should remember, however, that in no place will he find the effective measures of sanitary prevention as rigidly enforced as in the camps of soldiers not engaged in actual warfare. The facts from the fields of carnage in the present European war are not yet available.

The fellow who points out the fact that so many strong and robust persons are overwhelmed by typhoid does not controvert the other fact that individual resistance helps to keep down typhoid incidence. The vaccine enthusiast should keep this last fact in mind.

The "knocker," who sneeringly refers to individual cases of fever or to institutional outbreaks after the employment of vaccination, should have his attention called to the possibility of deterioration of vaccine and to the possibility of error of technic in its administration. The enthusiast should also keep these points in mind, along with others which are pertinent, lest his unqualified endorse-

ment be followed by disastrous consequences which will mitigate against the final general application of vaccination for what it can really do.

There's much more than might be said to both the opposer and the over-zealous. A great many of our Tennessee physicians are pushing antityphoid vaccination in their general practice. We hope they will acquaint their patrons with the real facts, making clear to them the limitations as well as the more favorable qualities of this valuable but not absolute preventive.

We would urge upon both "knockers" and "boosters," as well as upon the middle men between, that they carefully and conscientiously teach the positive value of careful nursing, screening against flies, proper treatment of excreta, the safeguarding of water supply, and sanitary closets for every home, school and industrial plant not provided with sewers.

DETERIORATION OF VACCINE IN TRANSIT.

There has been widespread complaint of failure to get results from smallpox vaccine and from other prophylactics which are more or less easily affected by subjection to varying temperatures. The methods of shipment of these products are faulty in the extreme and it is surprising that manufacturers have not improved upon them. Even though original packages are enclosed in sealed paper or wood containers, this is not enough to protect them from the effects of heat and cold to which they are exposed in transit. In a crowded express car with one poor, overworked and underpaid messenger to handle tons of stuff, including everything from a registered jackass or a pet monkey on through all the list of transportable merchandise to bundles of money amounting at times to many thousands of dollars, all of which he is responsible for and of which he must make accurate record, it is not to be wondered at that a package of vaccine will be found at one time serenely reposing against a chilling bag of ice while at another it will be discovered in the act of greedily absorbing the warmth which radiates from the steam pipes against

which it has found support. Nor is it to be wondered at that doctors use the products of one manufacturer for a while and then try those of another only to meet with failure of results from the use of all of them.

This is a matter of importance. If the makers of vaccines and sera and cultures want to make their products helpful in disease prevention to the extent that is quite possible, it is about time for them to devise a way for securing protection for them while in transit. A howl about error of technic upon the part of the doctor and about carelessness upon the part of the retailer has nothing to do with the responsibility that must rest somewhere, either upon the part of the shipper or the transportation companies, for getting these perishable products to market in good shape. There are too many doctors who are careful and who are entitled to get positive results, and too many druggists who have installed the necessary equipment for properly handling vaccines, for the old cry of "carelessness" to avail.

A satisfactory method of handling these materials should be found, too, which will not entail additional cost to consumers. If what can be seen means anything, the producers of "biologic products" make a profit that could stand reduction without bringing on bankruptcy.

TO STUDY PELLAGRA IN TENNESSEE.

Pellagra has been studied by many men in many places and in many ways with many purposes. Numerous theories have been advanced as to etiology and epidemiology and each new theory has been grabbed at with eagerness by men who have found those previously put forward unsatisfying. But, except for a few purely personal and restricted investigations, pellagra has not been studied in Tennessee, nor has any one of the studies made elsewhere developed conclusions which fit in with facts apparent to the average observer in Tennessee.

Since pellagra has rapidly pushed itself to position in the list of prevalent seasonal diseases which makes it a cause of great anxiety to public health workers, because it is extremely prevalent in many countries, because each

succeeding year yields larger returns of cases in infested territory, and, further, because of the reason advanced in the preceding paragraph, a "Pellagra Commission" has organized itself at Nashville to undertake a survey of the city of Nashville and of parts of Davidson County with the view of collecting data and making observations which are to serve as a basis for beginning an intensive study of pellagra. This investigation is to be made on broad lines and with no preconceived notions to satisfy.

The Nashville City Health Department, the Davidson County Board of Health, and the Tennessee State Board of Health will be represented in this work by Drs. W. E. Hibbett, B. G. Tucker, and Olin West, respectively. Drs. J. W. Jobling and W. F. Petersen, of Vanderbilt Medical School, will direct the laboratory work, having associated with them several workers, whose names will be published later. Drs. Jobling and Peterson are prepared to begin the undertaking of an exhaustive scientific study of pellagra in Tennessee and are known everywhere as men thoroughly fitted for the task.

The Journal is very sure that the physicians of the state will gladly give such aid as is within their power to give to the end that this investigation to be made by our own men may be comprehensive, thorough, and successful. We ask that any who have had any considerable number of cases of pellagra under observation will report to the Journal or to Drs. Jobling and Petersen, Vanderbilt School of Medicine, Nashville. It is especially desired that the physicians of Davidson County will immediately comply with this request, since a survey will be begun in Nashville at once. Information is wanted concerning the age, sex and color of patients, history of exposure or non-exposure, diet, water supply, hygienic environment, and whatever may have important bearing.

A movement of this kind is entitled to encouragement and support. Let us all help our own research workers in their efforts to ferret out the true cause and to reveal the true nature of this very serious malady, pellagra.

Incidentally, but in all earnestness, let the Journal remind you that pellagra is a reportable disease. Help your public health agencies

to discover the true facts as to its prevalence by reporting all cases promptly.

DEATH OF WIFE OF M'NAIRY COUNTY PHYSICIAN.

Too late for insertion in the July Journal, we received a communication from Dr. T. G. Jackson, Secretary McNairy County Medical Society, informing us of the death of Mrs. Margaret Elizabeth Howell, wife of Dr. C. C. Howell, of Michie, Tennessee, June 27th. The McNairy County Medical Society took official action, extending their sympathy to Dr. Howell and requesting that the Journal make appropriation mention.

To Dr. Howell, who is a valued member of our Association, the Journal would extend sympathy in the great loss that has come into his life.

DR. THOMAS G. SHANNON.

Dr. Thomas G. Shannon, of Nashville, died at Murfreesboro on the morning of June 16th. At the time of his death Dr. Shannon was 81 years old, having been born at Rock Hill, Tennessee, in the year 1834. He had practiced medicine in Nashville for about thirty years until his retirement from active work about five years before his death. He had many friends among the physicians of Tennessee who knew him as a lovable man and as a trustworthy and efficient doctor. For the greater part of his professional life Dr. Shannon was an active member of the Nashville Academy and the Tennessee State Medical Association. He is survived by five children, one of whom is Mr. Eugene Shannon, Postmaster at Nashville. Mrs. Shannon died in 1913 at the age of 80 years.

One by one the veterans of Tennessee medicine, who have lived through the most momentous years of the world's history, are dropping off and going to the far home. They wrought well in their day and their memory will ever be revered.

DR. J. W. GRESHAM.

Dr. J. W. Gresham died at his home in Jackson on July 16th from the effects of a fall down the steps leading to his office. It is thought that Dr. Gresham was overcome

by the extreme heat, as he had consulted some of his professional friends for an indisposition thought to be due to heat prostration.

Dr. Gresham was a member of the Madison County Medical Society and the Tennessee State Medical Association, and enjoyed an extensive practice in Jackson. He was associated with Dr. Ambrose McCoy as Surgeon of the M. & O. Railroad. He was a 32nd degree Mason, an official in the First Methodist Church of Jackson, and was prominent in the business life of his city, having been a director in one of the banks.

Dr. Gresham was 42 years of age and had practiced in Jackson for about seventeen years.

News Notes and Comment

One way to handle a subject is to talk about every other thing in the wide world and not say a word about it.

Doctor Richmond McKinney, Memphis, has been elected a fellow of the American Laryngological, Rhinclogical and Otological Society.

The Journal will be grateful to any physicians who have cases of diabetes under observation if they will communicate with this office.

The "cancer number" of the Journal has been highly commended by numerous readers. The editor is very grateful to the men that made it.

Ground has been broken for the new wing to St. Thomas' Hospital, at Nashville, and building will be pushed as rapidly as is compatible with good work.

It's one thing to promulgate a set of "principles" and it's another thing to live up to them. It's something else, too, not to live up to the announced "principles."

A competent young graduate who desires a hospital connection and who does not object

to going to a Western State, may learn of a fine opportunity by writing to the Journal.

Dr. S. H. Hodge has returned to his home in Knoxville after some months' service as a surgeon in the European war zone. Most of Dr. Hodge's service was in Serbia, where he suffered an attack of typhus fever.

It appears to us as if certain reports to the House of Delegates of the A. M. A. were censored before they were read. The German censorship practice of naming no names was followed.

The offices of the Southern Medical Association and the Journal have been moved to Birmingham. Dr. Seale Harris will make Birmingham his home in the future and will engage in practice there.

Have you visited your county "poor house" lately? How do you like it? As a civilized being do you feel that your county can take any pride in it? If you were not civilized wouldn't you help burn it to the ground?

"Science alone can solve this deep mystery of the universe and wipe out the dreadful affliction of insanity. No funds should be withheld from the scientific departments in institutions to impair their usefulness or hamper their marvelous and admirable work." Spoken in Indiana, where the State does much more than simply to restrain the insane, how does this sound in Tennessee?

If we had our way every taxpayer would be forced to visit the jail and "poor house" of his county at least once a year; every state officer, including members of the Legislature, would be required to spend one week in the state penitentiary and a like time in the insane asylum just before the time for convening the Legislature. Then, maybe, we could get poor houses and prisons and asylums that would reflect credit rather than reproach upon the state.

"The problems of American citizens are whether the standards of our hygiene and our

sanitation shall be set by those who are willing to exploit their fellow citizens for gain, such as the Dowies and Mother Eddies, or by the men and women who know physical cause and effect and are willing to tell their fellow citizens how to conduct themselves in view of these causes and effects."—A. W. Small.

Every member of every State Association in the land should read the proceedings of the House of Delegates of the A. M. A. at the sixty-sixth annual session. In no other way can any adequate idea be gotten of the immensity of the work of this great organization and of the splendid service which is given through its many activities. Nor can any adequate idea be gotten of just how many and how pernicious are the influences that would hamper this work and curtail this service if they could. Read the Journal of the A. M. A. of July 3rd and learn what you should know of your great National Association and what it is trying to do for you and for the people of your country.

The Tennessee State Medical Association was well represented at the San Francisco meeting of the A. M. A. Both of our delegates, Drs. Bromberg and Crook, were on hand; Dr. E. C. Ellett, our President, was Chairman of the Section on Ophthalmology; Dr. W. H. Witt read a paper before the Section on Medicine; Dr. J. A. Witherspoon participated in the program of the open session commemorating the completion of the Panama Canal as a great tribute to sanitary science; Dr. Jack Witherspoon was in charge of an exhibit on which he received a certificate of merit; Dr. W. D. Haggard was in attendance upon the Council on Education and read a paper; Dr. G. C. Savage took an active part in the program of the Section on Ophthalmology, and others of our members were on hand to let the medical world know that Tennessee is on the map and expanding.

Society Proceedings

M'NAIRY COUNTY.

The McNairy County Medical Society met in regular session in the courthouse at Sel-

mer, Thursday, July 15th, at 1 o'clock, with Dr. W. T. Bell, Vice-President, in the chair, with the following members present: Drs. Abernathy, Baker, Bell, Key, Kendrick, Hodges, J. L. Smith, Sanders, E. M. Smith, Jackson. The following interesting and instructive papers were read and freely discussed by the society:

Potts' Disease, by Dr. Hodges.

Tetanus, by Dr. Abernathy.

Bright's Disease, by Dr. Sanders.

The Secretary read a communication from the State Secretary relative to the famous yarb doctor of Roane County. After some discussion the society made a voluntary contribution of \$4.00 to the above society.

T. G. JACKSON, Secretary.

SULLIVAN COUNTY.

The regular monthly meeting of the Sullivan County Medical Society was held at Elizabethton, Carter County, Wednesday, July 7th.

Since the organization of Carter and Johnson Counties with Sullivan, the society has adopted the plan of varying the place of meeting in order that convenience of attending may be equally shared by the doctors of the three counties. And if the meeting at Elizabethton may be taken as a fair example, the result will prove highly beneficial, for in point of attendance it was the best the society has had since its organization. But not the best in attendance alone, for aside from the unusual scientific and interesting professional part of the program, so well did the doctors of Elizabethton in their capacity of host, conspicuous among whom were Drs. E. E. Hunter and G. E. Campbell, uphold that city's reputation for hospitality and delightful entertainment, that the occasion will long linger pleasantly in the memory of those fortunately present.

The society was called to order at 11:30 o'clock, in the parlors of Lynnwood Hotel, by the President, Dr. C. W. Fleenor. Following the roll-call and the regular routine business, among which was the receipt of several applications for membership, Dr. W. R. Rodgers, of Bristol, read a paper on "Fractures." While Dr. Rodgers was very

naturally inclined to treat the subject strictly from the viewpoint of the surgeon, yet the very general discussion which followed the reading of the paper was ample evidence of the great interest the subject held for the profession, especially the general practitioner. Interest was added to the modern and scientific treatment given the subject by a demonstration of special work done along the same line by Dr. N. S. Peters, of Bristol, with the X-ray. Dr. Peters also gave the society a talk on the use of the X-ray in the treatment of fractures and its possibilities both in the after-treatment and the medico-legal aspect was very forcibly impressed upon his hearers.

The society having adjourned, the doctors were invited into the hotel dining room, where a delightful luncheon was served, after which an hour was devoted to cigars and sociability on the veranda.

In the afternoon Dr. G. E. Campbell conducted a clinic on "Pellagra" for the benefit of the members, during which they very much enjoyed a talk by Dr. T. B. Yancey, of the International Health Commission.

An invitation was then extended to the doctors to enjoy an automobile ride through historic and beautiful "Happy Valley." Several points of interest were visited, among which was the home of Tennessee's illustrious son, "Bob" Taylor, the latter incident forming a very happy ending to a most enjoyable and profitable day, for regardless of how well versed in science and schooled in experience the doctor may be, unless he is possessed with the "milk of human kindness," love for his fellow-man, and can carry into the presence of his patients that sunshine of love and poetry of which "Our Bob" was the personification, he can never attain to the ideal physician.

Among the members present were: Drs. W. K. Vance, W. S. Wiley, C. M. Cowan, J. S. Bachman, A. V. Keebler, W. R. Booher, W. R. Rodgers, N. S. Peters, Paul Kernan and J. A. Delaney, of Bristol; Drs. E. E. Hunter and G. E. Campbell, of Elizabethton; Dr. D. R. Stout, of Butler; Dr. C. W. Fleenor, of Houlston Valley; Dr. J. R. Butler, of Mountain City; Dr. W. W. Vaught, of May Mead; Dr. S. R. McDowell, of Blountville.

The society had as visitors: Dr. W. A. Miller, of Bristol; Dr. A. R. Collins, of Wautaga; Dr. B. B. Ensor, of Carter; Dr. S. B. Wood, of Roan Mountain; Dr. S. E. Raynolds, of Elizabethton; Dr. Wallace, of Wautaga; Dr. Razor, of Hunter; Dr. Campbell, of Elizabethton, and Dr. T. B. Yancey, of the International Health Commission.

SULLIVAN COUNTY.

The Journal is delighted to have a report which states that the July meeting of the Sullivan County Medical Society, held at Elizabethton, in Carter county, was a fine meeting with the largest attendance on record. There were several applications for membership and we are encouraged to hope that this society, organized in 1914, will grow into an organization such as it should be.

The Sullivan County Society is composed of physicians residing in Carter, Johnson and Sullivan counties. Neither Carter nor Johnson can support an active society, but there are good doctors in both counties who are alive to the value of medical organization and desirous of receiving the benefit that is sure to come from affiliation with a live medical society. Sullivan county has a comparatively large number of good doctors, who are capable of maintaining a society as good as any. We believe that they will all come in after a while and do their part to make the Tennessee State Medical Association a greater power for good than it can ever be until all who should do so are willing to put their shoulders to the wheel and push toward the heights we want to reach.

We are "just itching" to enroll the name of every ethical man in Sullivan, Carter and Johnson counties. We want them all in the State Association because we know they ought to be there.

BEDFORD COUNTY.

Bedford County Medical Society met in regular session July 15, 1915. Both President and Vice-President being absent, Dr. W. M. Orr was called to chair and called meeting to order, with following members present: Drs. Haggard, Sharp, Coble, Orr, Thompson, Taylor, Moody, G. W. Dyer, Horton, and Reagor.

Minutes of previous meeting was read and approved. A motion which was unanimously carried that the President appoint a committee of two to notify a Mr. William Thomas, of Nashville, that unless he stop the illegal practice of medicine in our county by the use of a cancer paste, he not being a registered physician, the Bedford County Medical Society would at once prosecute him for illegal practice. The acting President appointed on this committee Drs. T. J. Coble and J. H. Woods. Dr. J. H. Dyer was re-elected to membership in our Society. A motion to allow our members to consult with Dr. A. E. Fuston was rejected by a vote of 8 to 2.

Dr. J. P. Taylor read an interesting paper on "Summer Diarrhoea of Children," which was interestingly discussed by all present. After Society adjourned to next meeting, which will be August 19, 1915.

F. B. REAGOR, Secretary.

ROBERTSON COUNTY.

The July meeting of the Robertson County Medical Society was held in Greenbrier, Tuesday, July 21, 1915; meeting called to order at 10:30 a. m. by President Henry, with the following members present: Drs. Henry, Banks, Woodard, Mathews, Odom, Frey, Fyke, Moore, Johnson, Winters, Dye, Connell, M. L. Shoulters, Ramer, with Drs. Caldwell and Bromberg, Nashville, and Dr. M. B. Garner, Goodlettsville, visitors. All visitors were accorded the privileges of the floor in the discussion of all papers. Clinical cases were reported by Drs. Woodard, Moore, Odom, and every case was thoroughly discussed. Adjourned for dinner. The Society was entertained at dinner at the Worsham Hotel by the local physicians and Dr. Ramer.

Reconvened at 2 p. m., when Dr. Banks continued the report of clinical cases. After the report of this case, the reading of papers was taken up, and Dr. Mathews read a paper on, "The History of Anaesthesia." A motion was made that the discussion of this paper be deferred until after the reading of the next paper, by Dr. Odom, on "Local and General Anaesthesia." Both papers were discussed by nearly all present. By invitation, Dr. Garner read a paper on, "Life As Witnessed by a Country Physician."

Dr. Mathews moved that "the doctor's picnic" be held in September; carried. Dr. Shoulders moved that a committee of three be appointed to select the place of meeting and make all arrangements and report at August meeting; carried. Dr. Mathews moved that the President and Secretary-Treasurer, with one more member, be appointed to constitute this committee; carried. Dr. Odom was appointed by the President to be the third member. Dr. Banks moved that a Committee of Invitations be appointed; he was advised that the present committee had authority to attend to this part of the work; he withdrew his motion. Springfield was selected as the next place of meeting, and Drs. Porter, Ramer and Robertson to be Directors.

B. F. FYKE, Secretary-Treasurer.

DAVIDSON COUNTY.

May 18th.—The Academy was called to order at 8:20 p. m. by the President, Dr. W. E. Hibbett. The following members were present: Harris, Kennon, J. M. King, T. A. Leonard, Morrissey, Floyd, Buckner, Bloomstein, Wilson, Glasgow, M. O. Davis, Morrison, Schell, Keller, Aycock, Orr, Ezell, C. F. Anderson, Edwards, McKinney, D. Eve, Jr., Shoulders, Williamson, Pickens, O. Bryan, Billington, L. Bryan, R. A. Barr, McCabe, Tigert, Cullom, J. A. Witherspoon, J. Witherspoon, B. G. Tucker, Head, W. B. Anderson, H. King, Pollard, Nichol and L. Smith.

The minutes of the previous meeting were read and approved. The Secretary read a communication from Dr. J. W. Handly in which he acquainted the Academy with arrangements he had made with the T. C. Railroad for a special coach for the convenience of members who would attend the Middle Tennessee and Upper Cumberland Medical Societies.

The essayist of the evening was Dr. W. H. Witt, his subject being "The Heart in Some Acute Infectious Diseases." Dr. G. F. Aycock opened the discussion, saying that the chief heart complication of most infectious disease is myocardial change; albeit they are hard to detect. This accounts for sudden death in some of these cases, e. g. scarlet fever. According to R. N. Wilson of Phila-

delphia, said the speaker, the effect of acute infectious diseases may make itself evident in some diseases developed later on.

Dr. Gallagher discussed the abuse of strychnine, quoting McKenzie and others to show that strychnine had no stimulating effect whatever on the heart.

Dr. Witt (closing) said that the object of his paper was to call attention to the fact that stimulation is not necessary in ordinary cases and that preventive measures in the management of cases are much better. In sudden heart weakness, he said, however, diffusible stimulants will serve well.

Under the head of case reports, Dr. Hibbett asked the co-operation of the physicians in combating typhoid. He stated that the City Board of Health is furnishing crude carbolic acid free for the disinfection of stools of typhoid cases. He also urged the early report of cases, even suspects.

Dr. J. A. Witherspoon urged typhoid immunization. Dr. Hibbett said that the Board of Health was prepared to furnish vaccine free to physicians for the immunization of patients.

Dr. Witherspoon moved that a committee of three be appointed to formulate, with the Health Officer, a statement to be published in the press in regard to the prevention of typhoid. Seconded and carried. The Chair appointed Drs. J. A. Witherspoon, Witt and Gallagher.

Dr. J. A. Witherspoon reported a woman 26 years old with a large gastric ulcer on whom a gastro-enterostomy was done after the Stippey method of treatment had failed. She did well for thirty-six hours, when her temperature began to rise, finally going to 109 4-5. Before death there was delirium. Her pulse was rapid and respiration 22 to 26. Post-mortem failed to reveal any cause of death. He asked for the probable cause of death.

Dr. J. M. King reported a cancer of the back of the hand springing from a wart.

Dr. McCabe reported a case of cancer of the hand in discussing Dr. King's case. Dr. McCabe reported two unusual cases of surgery.

Dr. Glasgow reported a case of extensive

syphilitic involvement of the palate. This was discussed by Drs. Kennon and Orr.

There being no further business the Academy adjourned at 9:45.

Book Reviews

PRACTICAL MEDICINE SERIES. 1915, Vol. I. Year Book Publishers, Chicago. Cloth, \$1.50.

The first volume of this well known "series" is devoted to general medicine. In it is reviewed the best literature on a number of subjects of practical importance.

Infectious Diseases, Diseases of the Lungs, Diseases of the Heart, Diseases of the Arteries, Diseases of the Blood and Blood-making Organs, Diseases of Ductless Glands, Metabolic Diseases, and Diseases of the Kidneys are the general headings, and under these headings a very helpful review of the writings of the day on conditions of most interest to the busy doctor is presented.

MEDICAL ELECTRICITY AND ROENTGEN RAYS AND RADIUM. By Sinclair Tousey, A.M., M.D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Second edition, revised and enlarged. 1219 pages, 798 illustrations. Philadelphia: W. B. Saunders Company, 1915. Cloth, \$7.50 net.

This volume, unlike some others on this subject, impresses the reader at once as not the product of the biased enthusiast. For this reason it may be especially commended to any one in any branch who may happen to be interested in one or more phases of the subject. This is especially true for the reason that it is so comprehensive as to give a lucid explanation of any phase in this great and growing branch. To the specialist it is ever a ready reference for anything up to the present. The conservatism shown on the newer things is especially good for those who would tend to be overzealous.

The chapters on the sources and forms of electricity are so clear, and so plainly illustrated, as to be good for the undergraduate as well as all others.

No practitioner or surgeon of the present day should miss reading the chapters on physiologic effects of electricity and electropathology. Any doctor would get something worth while here.

The chapter on electricity in diseases of the nervous system is very scientific and should serve to clear up many erroneous ideas as to the value of different currents in different conditions, or as to the harm to be done by the indiscriminate user. The paragraphs on electric sleep, electric death and its causes are exceedingly interesting, especially in view of the fact that this is the great mode of capital punishment of the present day.

What is said of the different light treatments, especially the Finsen and the Krowayer, with their illustrations, may be instructive to those interested in skin diseases. The author gives the most complete treatise on High Frequency current that could be desired by anyone. It deals with every known method of using it, and gives its therapeutic value in such an exact way that the indiscriminate user would do well to investigate it.

As to the Roentgen Ray he gives everything—even the last word. As to fluoroscopy and radiography he takes each and every part of the body separately so as not to leave out any point of value in the method. This is what we all need realizing that accuracy in the ideal of radiography toward which all are striving. The radiotherapy includes everything, and best of all, is based on ground that is safe and sane.

On radium, like X-Ray, he gets everything and stays away from over-enthusiasm.

It is the best book for all, from the medical student to the specialist.

H. K.

DIARRHOEAL, INFLAMMATORY, OBSTRUCTIVE, AND PARASITIC DISEASES OF THE GASTRO-INTESTINAL TRACT. By Samuel G. Gant, M.D., Professor of Diseases of the Colon and Rectum at the New York Post Graduate Medical School, 604 pages, illustrated. W. B. Saunders Company, Philadelphia, 1915. Cloth, \$6.00 net.

Dr. Gant's wide experience and signal success in the treatment of diseases of the gastro-intestinal tract have fitted him in a peculiar way to write on diarrhoeal, inflammatory, and obstructive diseases. That part of his book under review which is devoted to parasitic intestinal diseases does not indicate that he has had any very great right to burden the literature with matter on this particular subject. Either that, or he is not very greatly interested in parasitic intestinal diseases. His chapters on intestinal parasites for the most part, like those in practically all text-books which pay any attention at all to this important subject, are not worth the time and effort that it took to prepare the copy and have it put into a book.

Dr. Gant is a strong believer in irrigation in practically all intestinal inflammations and disorders, and much space is taken in this volume in emphasizing the value of this method of treatment of which he is the greatest advocate. He does not neglect other methods of treatment in urging irrigation, but, on the other hand, fully discusses the rational medicinal and surgical methods that can be advantageously used in the treatment of conditions under consideration.

Classification, symptomatology, diagnosis, prognosis and all that should be taken up in the discussion of the diseases which are treated of in this book, except pellagra and parasitic intestinal disease, are handled in a way that one would expect

from a man of Dr. Gant's ability, and his book is very valuable for this reason.

CIRCULATION IN HEALTH AND DISEASE. By Carl J. Wiggers, M.D., Assistant Professor of Physiology in Cornell Medical College. Illustrated. Lea & Febiger, Philadelphia, 1915.

Professor Wiggers distinctly emphasizes the value of clinical observation and would not have any one underestimate the importance of careful clinical and laboratory methods in arriving at conclusions. At the same time, he would impress the very great importance of instrumental methods as dependable aids through which direct observations can be confirmed or made possible of intelligent interpretation. He is particularly careful to warn against errors which arise through imperfections in certain of the mechanical contrivances which have been invented and have come into greater or less use in various laboratories. His work impresses us as a sincere effort to place instrumental methods of investigation upon a "safe and sane" basis and to point out their value as supplemental to commoner and less strictly accurate methods. His monograph is divided into three sections, the first dealing with the physiology of the circulation, the second with graphic clinical methods, and the third with diseases of the circulation. This is a valuable contribution to an important department of modern medical science.

THE TREATMENT OF FRACTURES; With Notes Upon a Few Common Dislocations. By Charles L. Scudder, M.D., Surgeon to Massachusetts General Hospital, Associate in Surgery at Harvard. Eighth edition, revised and enlarged, 734 pages, with 1,057 original illustrations. W. B. Saunders Company, Philadelphia, 1915.

Why should a "standard" like this book be reviewed? Everybody knows "Scudder's Fractures" is standard, and everybody knows that each new edition will be revised to comply with modern conception and enlarged by the addition of whatever is worth adding. Nothing can be gained by a detailed review. One could only contrast Scudder against one of the few men equally eminent. Suffice it to say that this new eighth edition is just what you would expect it to be—full, explicit, up-to-date, sound, beautifully illustrated with original illustrations, and without fanciful theory. If you intend to treat fractures you will be remiss in your duty to your patient and to yourself if you fail to have Scudder on *The Treatment of Fractures*—Eighth Edition.

COLLECTED PAPERS OF THE MAYO CLINIC.

Edited by Mrs. M. H. Mellish. Vol. VI, 1914. W. B. Saunders Company, Philadelphia, 1915. Cloth, \$5.50.

This is the sixth volume containing papers selected from those which have been published from the Mayo Clinic and is one of the most

valuable of all the compilations which have been made of material from this institution. The true ring of scientific honesty sounds out from every page and every paper in the book. Every reasonable reader will be so impressed.

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Paid Medical Defense

Knoxville, Tenn., July 2, 1915.

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ACUTE AND CHRONIC RHEUMATISM.*

By Frank Billings, M.D.,
Chicago, Illinois.

Mr. President and Members of the Tennessee
State Medical Association:

I appreciate very much the honor that your officers conferred upon me by inviting me to come here and talk to you; at the same time I feel my own shortcomings in attempting to say to you what I desire. The subject chosen, "Rheumatism, Acute and Chronic," is one about which I do not expect to say anything especially new or to describe to you any better method of management than that which you already know.

Acute rheumatism has long been recognized as an infectious disease. But I think that those who believe it to be an infectious disease have not been able to satisfy themselves that it has been proved to be infectious. However, we may now say that its cause has been discovered. To Paine and Poynton must be given the credit for the discovery of the infectious micro-organism causing the disease, and their work has been confirmed by Beattie and others. The micro-organism has been called the streptococcus rheumaticus, diplococcus rheumaticus and also micrococcus rheumaticus, but undoubtedly it is the different forms in which it appears in cultures which has given rise to these different terms. The micrococcus rheumaticus has not easily been recognized in diseased tissue or exudates

of patients, and because of that fact its etiological relation to the disease has been disputed. Within the last two years Dr. E. C. Rosenow of Chicago has been able to recover the micrococcus rheumaticus from the exudates of joints and from infected muscles of patients suffering from acute rheumatic fever, with special culture media and special laboratory technic. When the organism so obtained is injected into animals, infection of joints and muscles with all of the phenomena of acute rheumatic fever is produced in the animal. From the tissue and exudates in the joints of the experimental animals the micrococcus rheumaticus has been recovered so that now we may say that all of Koch's laws in reference to the etiological relation of a micro-organism to a disease have been proved in reference to acute rheumatic fever.

This micro-organism belongs to the streptococcus group and occupies the lymphoid tissue of throats of individuals who live in dense communities, practically always. It may also infect individuals who have bad teeth, involving the alveolar sockets, the sinuses of the head, or may occur in local infections in the subcutaneous tissues anywhere about the body and even about the finger nails and toe nails.

As to the etiology of the chronic types of infection of joints and of muscles which we ordinarily designate as rheumatism, there is a great question of dispute. There can be no question that many of these chronic types of joint and muscular diseases are infectious, but there are other types that are purely metabolic, especially those of joints, and there are still other types that are neuropathic. Of the metabolic types gout is the best example, and so also are the Heberden's nodes occur-

*Read at meeting Tennessee State Medical Association, April, 1915.

ring in the distal phalanges as changes incident to deficient nutrition from poor blood circulation. The Charcot joint is the best example of the neuropathic.

The vast majority, however, of the chronic arthritides are undoubtedly infectious as the chief etiological factor, the infection arising in some focus in the head or elsewhere in the body. The micro-organism which produces these chronic types also belongs to the streptococcus group, but it is a strain of the streptococcus which is less virulent than that which produces acute rheumatic fever.

A study of patients suffering from acute rheumatic fever shows practically always some form of focal infection, in the head as in the faucial tonsil, but sometimes located in one of the sinuses and also sometimes in a dental alveolar abscess. Rare cases show focal infection in subcutaneous abscesses and about the toe nails as has been proved experimentally. Usually a patient who suffers from acute rheumatic fever has been exposed to what has been called a cold and suffered in consequence from acute or subacute tonsillitis or a coryza, usually meaning sinusitis. This acute or subacute focal disease precedes the development of the acute rheumatic fever by a few days or a week or longer. Apparently during that period of time the streptococcus of the focus undergoes certain specific changes due to oxygen tension or other conditions which modify the pathological specificity and it attains a certain affinity for the joints, the muscles and the endocardium which it invades hematogenously. The reaction of the local tissues and of the body generally results in the phenomena we call rheumatic fever. The micrococcus rheumaticus, better termed streptococcus rheumaticus, can be obtained as I have before stated, from the exudates of joints and tissue by the methods which have been evolved by Dr. Rosenow, practically in every patient. But few of the invading organisms reach the exudate of the synovial sac because the blood vessels which nourish the interior of the joint do not pass through the synovial membranes, but end in subserous tissues. Therefore, the invading organisms lodge in the subserous tissues, and only those gain entrance through the joint exudates which pass through with the leukocytes of the exudate.

But with the new methods of culture which Dr. Rosenow has used they may be obtained practically always in the exudate.

In the chronic arthritides of infectious origin a clinical study upon patients has been made at the Presbyterian Hospital in Chicago in which there has been co-operative work done by the clinician, the pathologist and bacteriologist. By proper organization and a proper esprit de corps in the hospital it has been possible to make an experimental study upon many of the patients. With the consent and often with the voluntary request of the patient, exudates of joints, pieces of capsule of joints, particles of infected muscle, fibrous nodes; lymph nodes, etc., have been removed from the patients for study. Histological, cultural study of the infected tissues so removed has been made. From the tissue there has been found practically universally a micro-organism belonging to the streptococcus group. These strains when injected into animals have produced joint and muscle lesions and the growth of fibrous nodes and infection of lymph nodes near joints in the animals just as these morbid conditions occurred in the human being. The study of the tissue proved that these invading organisms reached the tissue through the blood stream, that is, hematogenously, just as in acute rheumatic fever.

Like strains of streptococci obtained from the same patients in focal infection of jaws, tonsils, sinuses, etc., and animal experimentation with cultures made from the focus of infection produced, in the great majority of animals, chronic joint and muscle disease similar to that produced by the infection of the micro-organism obtained from joints, muscles, etc. The study of the tissues obtained from the experimental animals, as well as the tissue of human patients, showed that the invading organisms in the blood stream lodged in the endothelium or small blood vessels, or joints, muscles and other tissues. There the invading organism excited cellular proliferation and partial or complete obstruction of the blood vessel. A more acute infectious hemorrhage would occur into the surrounding tissues. In the more chronic forms the local morbid changes seemed to be due to the deprivation of nourishment through obliteration of many small blood vessels.

The morbid anatomy of the acute types of joint disease present in acute rheumatic fever is that of edema and an exudate into the joints and of small hemorrhages and edema of muscles. The acute rheumatic fever is self-limited in its course, as shown by the elder Flint, coming to an end in an average of about twenty-five days with practically always restoration of health by resolution. In the acute type of the disease the invading organism usually has an affinity for the endocardium and less often for the pericardium as well as for joints and muscles.

The effect in the heart of the hematogenous invasion produces mural endocarditis and usually well-known valvular disease. The specific organism seems to have a much greater affinity for the heart and pericardium in the child than in the adult. Just why, one is not able to say; possibly due to the larger content of lymphoid tissue of the child.

In the chronic infectious arthritides the morbid changes in the tissue involving the joints and muscles are dependent not only upon the character of the infectious micro-organism, but also upon the deprivation of nutrition due to the obstruction of small blood vessels and also to the diminution in oxygen content of the tissues which enables the organism to grow better than a larger oxygen content. The blood vessel supply of the joint is first to the periarticular tissues and to the base of the synovial sac, and second the nutrition to the cartilage and epiphysial ends of the bone through nutrient arteries of the bone. Therefore, one finds patients suffer from peri-arthritis with synovitis or an osteo-arthritis involving alone the cartilage of the bone or the invading organism reaching all parts of the joint through the different sources of circulation may produce a panarthritis. The same patient may present in different joints a peri-arthritis, a synovitis, an osteo-arthritis or a complete panarthritis. As in the acute type, the muscles may be involved in the chronic form of arthritis. Many patients suffer from chronic myositis of rheumatic type without any involvement of joints, the deformities occurring about the joints, due to contraction of muscles.

If the tissues of the body are deprived of part of the nutrition through obstruction of

blood vessels, metabolic changes occur in the form of interstitial proliferation in muscles, increase of fibrous tissues in periarticular tissues, fibrous nodes upon tendons with atrophic and proliferative changes in cartilage and bone of joints. These changes may occur in any of the tissues of the body by ligation of a part of the blood vessels supplying tissues and in the joints in particular the morbid anatomy of an arthritis deformans may be produced by ligation of some of the blood vessels of a joint without infection. This has been proved by actual experimental work.

The hematogenous mode of involvement in chronic types of disease, the character of the invading organism and the resulting lessened nutrition lessened oxygen supply, with the consequent metabolic changes in the tissues, result in a chronic process. The changes in the tissues of joints, the shortening of the muscles due to fibrosis produce the deformities.

An important and interesting problem is the method by which the infectious organism in a focus of infection attains a specificity and pathological affinity which results in the production of an acute disease of joints and muscles in one case and a chronic type of disease in the other. It is also an interesting fact proved by experimentation that the acquired affinity of the infectious organism of a focus may result in the dissemination when injected into the blood stream of an animal, to designated parts, if one may use that term. Thus from a focus with a streptococcus and certain type of affinity, the majority of the infected organisms will pass to joint tissues or muscles. Another strain with this affinity may pass to the stomach wall chiefly. In another instance another strain may pass chiefly to the appendix or again to the gall bladder, and it is well known that a strain of streptococcus with the characteristic of green producing halo on culture media and therefore called streptococcus viridans, will have an affinity for the endocardium in the production of a chronic or subacute type of endocarditis, which is malignant, because it usually kills.

How this affinity is acquired in the focus we do not know. Rosenow seems to think it has something to do with the oxygen content of the tissues, but there must be also other modi-

lying influences. It is a fact that a strain of streptococcus obtained from a focus of infection having a certain affinity, will retain that affinity in the culture medium but a short period of time. The streptococcus viridans obtained from an alveolar abscess, or elsewhere, may in subculture have all the characteristics of a streptococcus hemolyticus, etc.

Besides the streptococcus group and the acute and chronic types of joint and muscle lesions which they produce, you may have acute and chronic joint infections due to other micro-organisms. The gonococcus from its focus in the deep urinary tract, seminal vesicles and Fallopian tubes, may produce characteristic systemic lesions. This occurs hematogenously and in the chronic type of gonorrheal arthritis the morbid anatomy is so like that produced by the streptococcus group that it would be difficult to differentiate them. In the acute type suppuration is apt to take place in gonococcal joint infection. Tuberculosis usually invades the joint through the nutrient arteries involving the epiphysis first.

In acute rheumatic fever it is interesting to note that the invading organism may infect other tissues than the joints, muscles, endocardium, pericardium, heart muscle, etc. In 1907 Vincent of Paris reported tenderness and enlargement of the thyroid gland in rheumatic fever. He made several different reports in the course of the next three years and stated that as high as 65 to 70 per cent of the patients suffering from acute rheumatic fever showed more or less tenderness and enlargement of the thyroid gland. Like reports have been made from some of the German clinics. Of the patients observed in the Presbyterian Hospital since Vincent made his report, not less than 50 per cent have shown enlargement and tenderness of the thyroid gland. Acute rheumatic fever is often associated with excessive tremor, undue overaction of the heart and excessive sweating, and it may be that the involvement of the thyroid gland with over secretion of the organ may be the cause of these phenomena. An over acting thyroid gland is often associated with diminution in carbohydrate tolerance of the patient. In our patients with rheumatic fever and a palpably enlarged thyroid gland, sugar appeared in the urine when the patient was given 50 grains of

glucose in solution on the fasting stomach of the morning. Vincent states that in some of the patients under his observation the thyroid enlargement persisted after recovery from rheumatism and in some of these patients all of the phenomena of Grave's disease persisted.

It is well known that chorea is related to acute rheumatic fever and undoubtedly the streptococcus rheumaticus is the cause of chorea of this type.

Acute appendicitis sometimes occurs in the course of acute rheumatism and the fact that Rosenow has been able to produce acute appendicitis by the injection into animals of certain strains of streptococcus may explain the occasional recurrence of acute appendicitis in rheumatism.

In our experimental work subacute nephritis with bloody urine has resulted from focal infection and has also occurred in some of the patients suffering from acute rheumatic fever. Elsewhere I have reported the occurrence of acute or subacute hemorrhagic nephritis associated with focal infection and the good result of the removal of the focus in the management of nephritis.

We may ask why certain people suffer from acute rheumatic fever, many others from chronic myositis, chronic arthritis due as I believe to a focus of infection as the chief etiological factor, when practically all people who live in crowded communities harbor these same infectious organisms in their throats and noses and elsewhere in the body.

We all have more or less defense against disease either acute or chronic. This resistance of our bodies may be broken down by over-fatigue, by unusual exposure to cold and wet, by exhaustion from want of good food and from dissipation in alcohol, misuse of food, etc. Undoubtedly in our modern life we are individually and collectively unclean. We live in illy ventilated, superheated houses, with air deprived of all moisture. We pass from superheated dry air into damp, cold, dirty air. We give every opportunity for continued local and focal infection and do about everything we can to lower our resistance to infection. Those most poorly armed against infection succumb.

In the treatment of acute rheumatism there is really nothing new to say. Salicylic acid and its compounds have a curiously beneficial

effect when used early and in massive doses. So used the result is often miraculous. If used inefficiently in the early stages or used in any dose in the later stages they have a much less effect, but always do relieve the pain. Alkalies have long been used in rheumatism and it has been alleged that they safeguard the heart against infection. This is probably not true.

Vaccines and sera have been used in the treatment of acute rheumatism. Vaccines are used in the treatment of an infectious disease for the purpose of exciting the production of antibodies; that is, the defenses of the body against the invading organism. In acute disease with the living infectious micro-organism in the tissues, one would think that its presence would arouse all possible defense, and that is probably true. Therefore, the use of vaccine in the acute infectious fevers has not proved of value because the addition of bodies of dead micro-organisms, even though they be of the same type as that causing the disease for which they are used, cannot arouse the formation of more defenses. One would believe that they would possibly produce harmful effects inasmuch as additional toxic material was placed in the patient's body.

As to the use of toxins one will have the same feeling of doubt. Phylacogen or Rheumo-Phylacogen purporting to be a substance containing the toxins of various pathogenic and non-pathogenic organisms, including a preponderance of the streptococcus rheumaticus, has been used extensively by physicians all over the country. A statement has been published by the manufacturers of Rheumo-Phylacogen that out of 15,000 patients suffering from acute rheumatism so treated 12,000 recovered.

The patient with acute rheumatic fever usually does not die from the disease. Occasionally with hyperpyrexia the patient may die. Very young patients with pancarditis may die. I have practiced medicine thirty-five years and have never seen a patient suffering with acute rheumatism die from that disease. I have seen patients die of the sequel of the disease, usually that incident to the lesions of the heart. Therefore, I can see no reason to use a remedy which is acknowledged to contain various bacterial

toxins which are not in any sense related to the cause of rheumatism in the management of that disease.

As to the management of chronic arthritides due especially to a strain of the streptococcus, I will not at this time say much to you. Already I have written rather fully upon that subject. In short, one may say that the first essential is to get rid of the source of the disease; that is, to locate and remove the focus of infection. The important thing is to be sure that one finds the real focus. Too often the faucial tonsil is considered the seat of the focus and is unnecessarily removed. In every patient a thorough examination of the sinuses of the head, X-ray films should be made to enable one to know exactly conditions of the roots of the teeth and a thorough examination should be made of all parts of the body. When one is sure of the seat of the focus it should be eradicated.

That part of the treatment is easy. One must remember that the patient is still infected systemically, that as a rule he is poorly nourished, has a poor point of view because of his long suffering and inability to secure relief, and that his general circulation and the circulation of the infected parts is very poor. To put the patient in a condition to enable him to get rid of his general infection it is necessary to restore him to a better general condition. He needs proper surroundings, good air, proper clothing, mental diversion, good food of all kinds properly balanced and suited to the individual. In many instances he needs restorative tonics. Excretions from the body must be attended to. The general circulation must be improved by tonic baths best given in showers or sprays alternating hot and cold. The local circulation can be improved later by passive and active exercise in the form of massage and calisthenics and later by a more active out-of-door exercise of all kinds. When one persists in this sort of general upbuilding of the patient and has the patience to direct the patient for long periods of time a favorable result may be looked for.

The use of autogenous vaccine obtained from the focus of infection or from the infected general tissues may be used for the purpose of exciting in the exhausted patient's

body the formation of antibodies and other defenses. The use of vaccines, however, while probably helpful, is of secondary importance compared with the hygienic measures I have named.

Finally let me say that we as physicians should endeavor to prevent the occurrence of acute and chronic rheumatism by teaching people individual cleanliness and a proper general hygiene. The child who suffers from chronic tonsillitis or overgrowth of lymphoid tissue in the upper respiratory tract should be relieved of this condition, and the earlier it is done the more likely will the child escape acute rheumatic fever and its dire consequences in the young—valvular heart lesion. So will the child escape many other conditions which prevent its proper development by the production of a clear upper respiratory space. In the young and in the old proper attention should be given to the mouth. Until now we as physicians have looked upon diseases of the teeth and alveoli as unimportant. Probably alveolar disease and septic conditions about the gums are very potent sources of systemic disease which may be readily controlled by a proper hygiene. The use of the X-ray in obtaining a knowledge of the exact condition of the roots of the teeth has become a necessary step in a proper surgery of the mouth by the dentist. Without the use of X-ray films the dentist may overlook conditions which are a menace to the health of the patient.

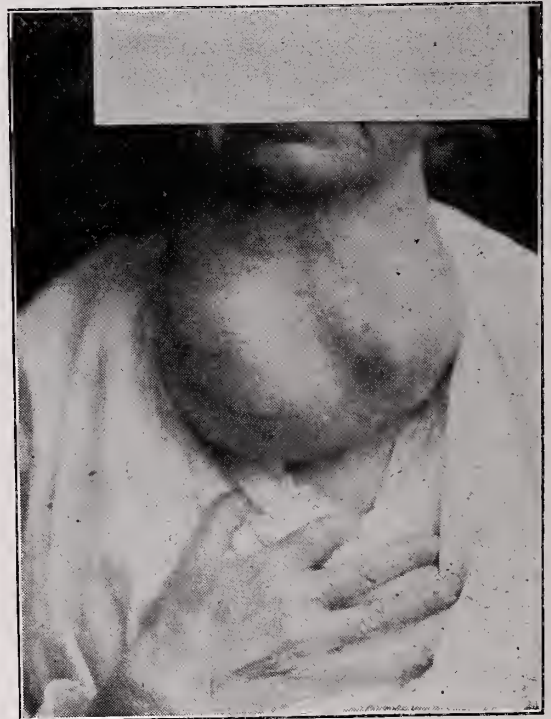
Finally we must teach the people generally the benefits of pure air in their homes and in their public halls and other places of amusement where they congregate. A proper application of public and individual hygiene will prevent many of the conditions which lead to the incidence of both acute and chronic rheumatism.

COLOSSAL GOITERS.

By William D. Haggard, M.D., F. A. C. S.,
Professor of Surgery and Clinical Surgery,
Vanderbilt University; Surgeon to St.
Thomas Hospital, Nashville, Tenn.

Goiter was formerly used as a general term for all forms of tumors and only in the last

century, has been restricted to tumors or enlargements of the thyroid gland. The literature is teeming with references to the large size attained by these growths, but is rarely specific in regard to individual cases. They are often spoken of as being as large as a baby's head or an adult head. Sometimes as hanging down in front of the breast and also as being large enough to be slung over the shoulder. Many cases are described as being of such a size as to be worn in a sort of sac or bag used as a suspensory. Weisman reported



a cyst weighing nine pounds. One of my cases of diffuse colloid goiter weighed over seven pounds, and several have reached over two pounds avoirdupois. Nearly every community can boast of many examples of goitrous enlargements, but in this country where they are sporadic they do not seem to attain the great size that has been described in certain goitrous districts, like the Himalaya Mountains and the Tyrolean Alps. Gross said he had never observed a case in the negro. Nowadays it seems to be fairly common in that race.

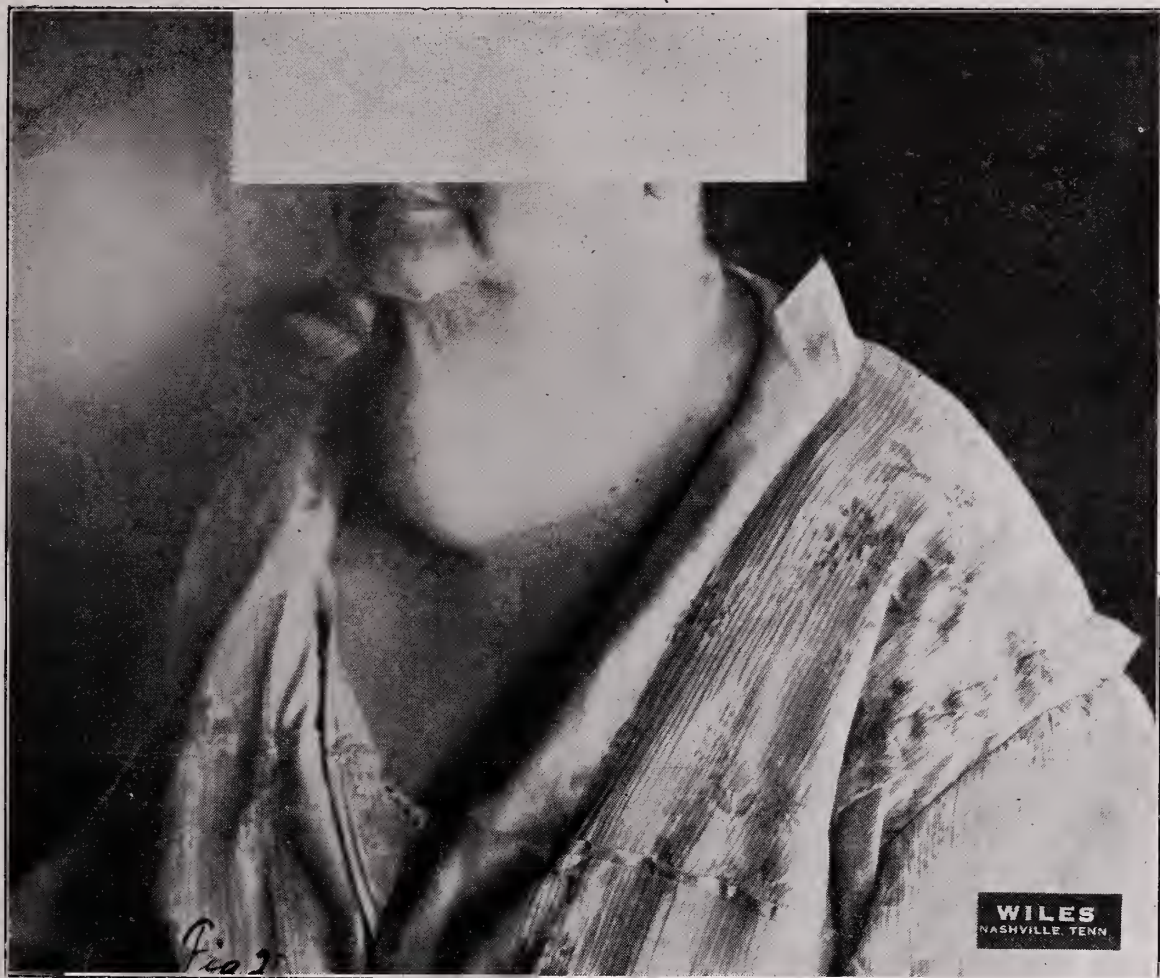
The increased pathological interest and sur-

gical advancement that have been made in the last quarter of a century and probably in the last decade in the surgical cure of goiter will doubtless prevent in the future such enormous growths as have found their way into the older texts. In this brief record illustrations are presented of some unusual growths of the thyroid gland that have come under the observation of the writer, some being of such tremendous size as to be described as colossal. I

operation is demanded to prevent either impending death or such an increase of severe symptoms as to render life uncertain.

Clinically these larger growths are, as a rule, either colloid, which is the classical and more frequent form of goiter, or cystic growths, or the adenomata.

The adenomata are usually soft and doughy. They begin as a rule in the lateral lobes, but on account of the pressure of the muscles are



have also the pleasure of presenting some extremely large growths from the Mayo clinic, which do not necessarily represent the largest ones, but of great size nevertheless.

These excessive growths are of more academic than real surgical interest, as many of them are so tremendous that operative intervention is almost prohibitive. Yet many of them take on such severe complications that

often forced to the center where they protrude as a round, tense, globular mass in the front of the neck. Inasmuch as they are encapsulated it is impossible for any form of medication to have any effect upon an adenoma any more than it would upon a sebaceous cyst of the back. Although medication is useless, fortunately enucleation in the early stages can be quickly and safely performed without removal

of the gland. When, however, they are multiple one must remove the larger and most diseased lobe and can often either resect the remaining side, according to the method of



Mickuliez or enucleate isolated adenomatus masses with a very satisfactory prospect of cure.

The enormous cysts are extremely satisfactory from a surgical standpoint, as they can be shelled out with considerable rapidity. The real surgical problem is in repairing the rather large base in the gland, which often bleeds quite freely. Continuous interlocking sutures of catgut are very satisfactory in these cases.

While, to be sure, the severest symptoms are not necessarily caused by the size of the growth, at the same time even a moderately enlarged gland may cause lateral displacement of the trachea, which may flatten it very much indeed and cause the curious metallic voice noticed in these cases. If the trachea is compressed anteroposteriorly it may be almost ribbon shaped and if the pressure is very great bilaterally it may assume the scabbard form;

whereas, if the lobes are one above the other the trachea is distorted into the shape of the letter "S". Kinking of the softened trachea has been known to cause sudden death. The growth may be retro-tracheal causing pressure on and deviation of the gullet with dysphasia. Such cases give a peculiar stridor on stooping over, or when a heavy burden is borne.

The pressure may also be exerted on the recurrent laryngeal nerve, causing paralysis and, of course, if both nerves are paralysed the patient becomes voiceless. These pressure effects are also occasionally attended with attacks of asthma, which have been called strumic asthma. Pressure on the large vessels of the neck often cause vertigo and headache and occasionally when the pneumogastric nerve is impinged upon, difficult breathing and faint-



ing spells ensue. If the sympathetic plexus is seriously encroached upon one often notices paralysis of the orbicularis oris with inability to close the eye.

The so-called goiter heart which so often attends these cases of diffuse, fibrous or colloid goiter is generally due to pressure on the vessels and dilatation of the right heart, both

where the growth is of unusual size, the resulting cavity is enormous and sometimes bleeds with frightful severity. One should have on hand large abdominal packs, as no amount of ordinary sponges or packing would be at all adequate.

When the growth is in front of the neck the muscles are often flattened and thinned out, and as the skin is elastic and yielding, allows the growth to hang down and has been denominated wandering goiter.

When these colossal growths are symptomless there is no indication for their removal.

While it can be accomplished in the majority it is more of a feat of surgical gymnastics than a pathological necessity.

In view of the many degenerative changes incident to these tumors and the great variety of mechanical and functional derangements, one might well ask the question, in these days



chambers may be affected and the heart muscle so thinned out that a myocardial degeneration is brought about, which gives the patient the characteristic breathlessness that so often attends goiter.

In growths which are permitted to attain a large size it is not uncommon for a portion or all of the enlargement to develop behind the sternum and into the thorax. This has been called floating, plunging or diving goiter. They are difficult to make out except by X-ray or dullness over the sternum. One should suspect it when the patient is unable to stoop with comfort. One of my cases had a sort of crowing respiration. Whenever the weight of the growth is allowed to press on the trachea as on stooping, the pressure upon the deep structures of the mediastinum is very deleterious and the enucleation of such growths is sometimes extremely difficult. If, perchance, it is an adenoma it may be pedunculated and if not too large can be readily removed, but



of greater safety in surgery, what does it profit a patient to carry around with them such unsightly and cumbrous burdens?

DISCUSSION.

DR. E. J. JOHNSON, Memphis: I have enjoyed

Dr. Haggard's paper very much indeed. He has given us a very instructive contribution. I quite agree with him in the points he has brought out, and I have nothing particular to add to what he has said except to impress upon the minds of the general practitioners the importance of recognizing and advising the so-called innocent variety of goiters being operated upon, as these cases might be considered non-surgical. He has shown here by physiological and anatomical reasons why we have in practically every case of goiter at some time or other in life a surgical condition to deal with from the appearance of the pathologic conditions and the changes that take place in the tissues.

Dr. Haggard has related an interesting case, and I had one recently like it, of hyperthyroidism, where the condition was so extensive and the capsule so thickened, that the thyroid gland, which is most essential to the economy, was absolutely strangulated or cut off and interfered with. In other words, normal secretion from the gland has been so interfered with that it necessarily brought about myxedema and death of the patient. We want to get away from the idea that goiters are at all simple. There is only one class in my opinion that should be considered non-surgical, and that is the class in girls around the age of puberty. I think, if they go on menstruating, usually at the age of 12 to 15, the condition may pass away, but if the condition remains normal, I should say after the age of 17, 18 and 20, then we should watch the case with care and advise proper anatomical readjustment of the glands. There is no doubt in my mind that every condition of this kind ultimately means a pathologic lesion and interference with the trachea and with the circulation, cardiac changes take place, and frequently when we are confronted by these conditions, we have a condition that is serious to deal with. If we can get hold of the patient in time, and handle it in a surgical way, correct this condition, bring about normal physiological function, we can possibly prevent a serious consequence.

DR. E. M. HOLDER, Memphis: It is a pleasure to hear Dr. Haggard read a paper because his paragraphs and periods are always well rounded and his delivery is good. In addition, he usually appeals to our sense of sight by stereopticon illustrations.

The surgical maxim today in goiters, just as in cases of gall stones, should be that there is no such thing as innocent goiters, except perhaps that type which occurs about the age of puberty. For a long time we thought gall stones were innocent if they gave no symptoms, and for an equally long time we also thought that goiters were innocent if they gave no symptoms. We are told by the physiologists that every drop of blood in the human body goes through the thyroid gland every hour of the life of the individual. Just think of the circulatory blood disturbance that might result from a goitrous degeneration of this gland.

I believe in colossal, (adenomatous, cystic or col-

loidal) goiters, the same principle should apply that applies in the exophthalmic type—that is, if the patient is not in good shape, or if the operation is at all extensive, that it should be done in two stages, as suggested by Dr. Haggard, thereby avoiding shock and conserving the patient's strength as much as possible.

The essayist reports that the only fatality he has had was a case of exophthalmic goiter. In all probability if he had divided this operation into two stages, the patient would be living today.

In colossal goiters the anatomy is so distorted that one is always in danger of injuring some vital structure. The recurrent, laryngeal nerves—the important blood vessels—the parathyroid bodies, any one or all may be pushed aside laterally, upward or downward by the aggressive growth of the goiter; therefore, thyroidectomy is not an operation that one inexperienced in this class of work should undertake. Great experience and special surgical skill is necessary in the handling of these patients.

In conclusion, I believe the general surgical opinion is that colossal goiters should be removed at the proper time almost as positively as should the exophthalmic type.

DR. HAGGARD (closing): It is known to most of you that we have with us today as a guest a distinguished scientist who has demonstrated the varieties of streptococci that are very constant in the production of goiter, and it may be that through his remarkable ingenuity there may be given to the world something that will cure these cases without the surgeon's knife. If so, I am sure we will all be happy to lay down our scalpels if Dr. Rosenow will complete his wonderful work in this regard. (Applause.)

ADDRESS ON THE ETIOLOGY AND EXPERIMENTAL PRODUCTION OF APPENDICITIS, ULCER OF STOMACH AND CHOLECYSTITIS.*

By E. C. Rosenow, M.D.,
Rochester, Minn.

Mr. President and Members of the Tennessee State Medical Association:

The bacteriology of appendicitis, ulcer of the stomach and of cholecystitis, as worked out in the past is largely the bacteriology of the exudates in and around the inflamed organs or the bacteriology of the different regions after death. A reliable differential bacteriologic study

*Read at Tennessee State Medical Association, April, 1915.

of ulcer of the stomach after death is considered impossible by bacteriologists, and I agree quite thoroughly with that view. But the bacteriology of ulcer of the stomach removed from the living patient at operation and by proper methods is very different and in these we have found it possible to make an accurate bacteriologic study of the tissues in and about the ulcer.

In the case of cholecystitis the bacteriology as it stands in the literature is not the bacteriology of cholecystitis, but of the contents of the gall-bladder, and that usually is valuable in the acute attacks, but in chronic cholecystitis the demonstration, for instance, of the colon bacillus in the bile is worth little as to telling what is causing the inflammation of the gall-bladder.

The mode of origin of appendicitis, of ulcer of the stomach and of cholecystitis is not well understood. The mode of origin of the various arthritides to which Dr. Billings has alluded, the origin of endocarditis, the origin of osteomyelitis, or infections in other regions of the body which are normally sterile, are considered by everybody to be embolic in origin. The bacteria necessarily are carried there by the blood stream. The mode of origin of inflammations in the appendix, of inflammations of the gall-bladder, the contents of which contain colon bacilli, or the mode of origin of ulcer of the stomach has not been thoroughly worked out. If appendicitis is commonly hematogenous or embolic in origin, it must be due to a streptococcus or other germ, as has been emphasized by Gohn and Ashoff, that has a specific affinity for the appendix, otherwise cases of appendicitis should give evidences of a generalized infection, with infection in other regions. The same thing holds true in cases of cholecystitis. If cholecystitis is commonly caused by bacteria carried there by the blood stream, it is necessary for these bacteria carried there to have, for some reason or other, elective power to grow in that organ when they cannot grow in others. Similarly this must be true in the case of ulcer of the stomach.

Perhaps I can spend the short time at my disposal to no better advantage than by showing you, by means of a few gross specimens and lantern slides, some of the lesions that I

have been able to produce in animals by injection (intravenous) of streptococci isolated from cases of appendicitis, of ulcer of the stomach and of the cholecystitis, and finally, to exhibit a table that illustrates the elective localization of streptococci obtained from these various sources.

(Here Dr. Rosenow passed around several specimens and then showed slides.)

The demonstration of streptococci in the focus of infection and in the tissue of the appendix at the time of an attack of appendicitis that have an affinity for the appendix when injected intravenously into animals, it seems to me, is good evidence, together with all the other facts, that the organisms in the throat or in the focus of infection was primary, and that the disease in the appendix was a result of an embolic infection, the streptococci getting into the circulation and finding in the appendix a favorable spot for their growth. When you couple this finding with the fact that subsequent to the attack this affinity of the streptococci from the focus has disappeared, not one animal in a series injected developing a single lesion in the appendix, you have good evidence for the embolic origin of appendicitis. Nor is it necessary to obtain a history of sore throat, for in some instances the focus of infection nevertheless harbored streptococci at the time of the attack having elective affinity for the appendix of rabbits.

The same thing can be said in cases of ulcer of the stomach and cases of cholecystitis.

We have heard much recently of the importance of various foci of infection. We know the importance of slight abrasions to highly virulent streptococcal infections. Why should not the breaking of the continuity of the mucous membranes as occurs in pyorrhoea be considered an entrance way for the organisms of lower virulence, but having elective affinity for these organs? As a result of my work on transmutation of streptococci and pneumococci the focus of infection should not, it seems to me, be looked on only as the infection atrium, but the breeding spot as well, the place best suited for streptococci to acquire affinity over a wide range. The streptococci from appendicitis, from ulcer, and from the gall-bladder are so much alike in morphology in their fermentative reactions, and other cultural characteristics,

that it is difficult to differentiate them, but when injected as isolated, they are different in their action in animals.

If streptococci can produce diseases so different, it seems to me impossible to get good results with drug store streptococcic vaccines in the treatment of cases of these various diseases. What good will a streptococcic vaccine do that the various commercial laboratories manufacture when used in such cases? There should be a vaccine developed and given for each specific disease.

(Editor's Note: Dr. Rosenow's address was followed by a lantern slide display illustrative of the epoch making work which he has done. His remarks in explanation of the slides shown and his graphic tables were of great educational value and held the absolute attention of his audience—a circumstance complimentary to the distinguished pathologist and to his intelligent audience of Tennessee physicians.)

**THE MANAGEMENT OF PELLAGRA: A
PAPER BASED UPON OBSERVATIONS
MADE IN THE ISOLATION HOS-
PITAL OF DAVIDSON COUNTY,
TENNESSEE.***

By B. G. Tucker, M.D.,
Nashville, Tennessee.

In presenting this paper to the State Health Officers' Conference of Louisiana, I desire to disclaim any pretense to ultra-scientific attainment. What I shall have to say is based entirely upon observations made in the course of a somewhat extensive experience with pellagra, in the homes of persons afflicted and in the Isolation Hospital of Davidson County, Tennessee, which institution is under my charge as County Health Officer. Our hospital is not a very pretentious institution and is not provided with those facilities necessary for a scientific study of any disease. In this institution we isolate smallpox, scarlet fever, measles, diphtheria, erysipelas, and other infectious diseases. Pellagra patients are confined to one wing of the hospital, but are allowed the liberty of the grounds when there

is no reason for confining them to the wards. The food for all patients and for attendants is prepared in one kitchen. The attendants are five in number and we sometimes have as many as forty patients in the hospital at one time. We have now twenty-eight patients with pellagra, and they have been admitted from all sorts of places in all stages of the disease.

From the standpoint of County Health Officer, the most crying need at this time, insofar as pellagra is concerned, is a local hospital where unfortunates with this serious disease can be well housed, given the benefit of proper hygienic surroundings and care, fed on food properly chosen for ration-balance and properly prepared for easy digestion and assimilation, and secure the benefits of common sense nursing and medical treatment.

There can be no doubt but that pellagra is more and more prevalent with every passing season, nor can it be doubted that the conditions demand, from a humanitarian and from a scientific standpoint, that some sensible and effective measures be instituted which will enable us to try, at least, to limit the spread of this malady which threatens to become one of the worst scourges with which medicine has ever had to deal.

Those who have had opportunity to discover the real truth with reference to the rapidly increasing prevalence of pellagra, and all who have given this matter serious consideration, are agreed that the only way open for solving the problems presented through pellagra incidence is through state control of this disease and control of its unfortunate victims. Only by confining the individuals who have contracted the disease can we hope to give them the proper treatment and save them from the worse fate than that which bitter circumstance has already thrust upon them. Aside from the question of proper care for those already diseased, it is not at all improbable that the protection of the common public demands institutional care for all who have pellagra.

In outlining the plan of management of pellagra as practiced in the hospital under our direction, I desire to first lay down one or two general rules, simple, but nevertheless important. The patient should not be per-

*Read at meeting Louisiana State Health Officers' Conference, 1915.

mitted to stay in bed all the time unless a very much weakened condition makes it imperative. On the other hand, he should be encouraged to be up and around early in the morning and late in the evening, taking only such periods of rest in bed as common-sense observation would indicate as necessary. Moderate exercise is beneficial and should be encouraged and enforced if need be. A tub or shower bath should be had at least once in each twenty-four hours. The surroundings should be cheerful and bright, attendants should be cheerfully disposed and intelligent enough to suggest pleasant occupation, and no chronic mopers should be allowed to depress the spirits of the patient. If possible, some interesting light occupation should be furnished for every patient whose condition permits.

General Medicinal Treatment.

Our conviction is that there is no "general medicinal treatment" for pellagra, as that phrase is generally understood. Certainly there is no drug that cures pellagra—it has no specific. The only one of all the "general" agents from which we have ever noted any benefit is Bland's mass in the liquid form.

We very well know that practically every text-book and practically every so-called authority recommend that arsenic in some form should be used in each and every case, but our experience has most positively convinced us that no good is to be expected from the administration of arsenic. In fact, we are firmly of the opinion that arsenic should not be used at all. It will hasten or aggravate the neuritis, cause swelling of the lower extremities, will make the diarrhoea more difficult to control, and certainly does not help to mitigate distressing nervous symptoms.

We have tried arsenic in practically all of its forms and combinations and have yet to see any benefit in any case which we could at all attribute to this agent.

In our hands tri-sodium citrate has given negative results.

Feeding.

In the feeding of pellagrins is to be found the most important part of their management. The diet should be as nutritious and as generous as is compatible with the patient's

powers of digestion and the condition of his alimentary tract. His strength is to be considered and it must be remembered that to him what he eats is both food and stimulant. This is true to a greater extent in pellagra, perhaps, than in any other disease.

When the attack is at its height, with the mouth raw and sore, solid food cannot be well taken, and at this time plenty of good milk, raw eggs, and other non-solid food should be given in as liberal quantities as the patient can be prevailed upon to take at two hour intervals.

After the mouth has become better and the inflammation of other parts of the digestive tract have improved with equal step, the patient can be put upon a more liberal diet. We make it a rule to give our patients regular meals at 7 a. m., 12 noon, and 6:30 p. m., which consist of a diet rich in proteins. Beef—steak or roast—beans and peas, Irish potatoes, toast and butter, bread of flour and bread of meal, milk, vegetables in season, are characteristic of our regular menu. At 10 a. m. and at 3:30 p. m. we give each patient one raw egg and from one-half to one pint of fresh buttermilk. We find that by forcing the feeding of patients with the character of food above indicated that improvement is almost always rapid and that the patient easily takes a much greater quantity of food than he thought possible. It is most surprising to see how large a quantity of proteid food this class of patients can take care of without any digestive distress. As a rule diarrhoea will get better under this regime instead of getting worse, and we are led to believe that feeding large amounts of food rich in protein content does not unfavorably influence the alimentary tract toward the occurrence of diarrhoea.

With continued improvement a change is gradually made from a diet extremely rich in protein content to one that is more normal, and if the patient is gaining in weight the mid-morning and mid-afternoon feedings are left off. Then our practice is to substitute a diet, making the change gradually, which is richer in carbohydrates and less rich in protein content. Rice, hominy, potatoes are now allowed, English peas, baked beans, chicken and fish, and, in fact, whatever goes to make a well balanced ration is now permitted.

There are those who dissent in the matter of allowing this diet as just outlined. Butter and fats are to be given in unusually large quantities, and will, as a rule, be easily digested. Fruit juices are gratefully borne and are probably of much worth.

The pellagrin demands proteid, carbohydrates and fat, and his diet is to be as generous as his digestion is good and as his general condition will permit.

In view of the "corn theory" the question naturally arises as to whether or not articles of diet containing corn products are to be allowed. If the physician believes that corn has any part in the production of pellagra, he will forbid it; if he does not take stock in that theory, he will probably allow his patient to use corn products. So far as we have been able to ascertain a reasonable amount of good corn bread will do no harm.

Treatment of Special Symptoms.

Dermatitis.—The dermatitis, as a rule, will not demand any special treatment. During an attack of pellagra, when the dermatitis is in full bloom, the patient should be religiously kept out of the sunlight. At no time in this stage should he be allowed to be exposed to the direct light of the sun, but rather should be kept all the time in the shade. Artificial heat aggravates the inflammation of the skin, too, and for this reason clumsy bandages should not be used nor should the patient be kept in a hot room nor allowed to "toast" his limbs upon which the eruption is marked by hot fires or radiators. Bandages are rarely necessary, if ever. A little sterile vaseline or Russian oil is generally all that is needed as a protective application.

Diarrhoea.—Diarrhoea is one of the most troublesome symptoms and at times is very hard to control. We have come to use thymol almost as a routine in the severer cases, repeating it at intervals of a few days. This will generally have a very beneficial effect, and later we employ hydrochloric acid and pepsin. It seems that the administration of these artificial digestants not only tends to lessen the diarrhoea, but also favors absorption, increases assimilation and promotes metabolic activities with a resultant gain in weight. Thus, through the general systemic improve-

ment the nervous balance is best restored and the patient is enabled to secure relaxation and rest in a normal way and in normal amount.

Stomatitis.—The stomatitis and glossitis during the height of the attack are not only painful, but sometimes interfere with chewing, swallowing and talking—even to the point where these functions are almost impossible. The tongue is sore, the gums are raw and bleeding, the whole buccal cavity is seriously and painfully inflamed. When this condition obtains, or even when the inflammatory condition is less pronounced, a mouth wash is of good service. We usually employ Dobelle's solution with an atomizer, and if the flow of saliva is excessive we use atropine in a dose of 1/150 of a grain repeated every six hours until the flow of saliva is satisfactorily checked. If the soreness of the mouth does not begin to show improvement within forty-eight hours we resort to the use of local applications of silver nitrate. As a rule we have found that no more radical treatment is necessary than the use of the Dobelle's solution. We would particularly emphasize the need for careful attention to mouth cleanliness, not only because of the comfort that is given the patient, but also because we believe that raw areas within the buccal cavity are inviting fields for the entrance of many varied germs.

Nervous System.—The whole nervous system of the pellagrin is "on edge," especially so during the acute attack. Narcotics and powerful sedatives are to be avoided as much as can be possibly done. When given for insomnia or for an acute attack with maniacal tendency they should be exhibited in small doses. A shower bath will often give far better results than any drug that can be resorted to. Rest in bed is best for the control of acute nervous symptoms.

Vertigo is not benefited to any appreciable degree by medicine. When insanity of a lasting type develops the patient should be confined in an asylum or hospital provided with proper detention facilities. No home is a fit place for an insane pellagrin. When they have become insane the only real service that can be rendered them and their families is to put them where they may be cared for as insane persons should be cared for and where

they can be prevented from working injury to themselves or to others.

In closing this paper I should like to call your attention to the fraudulent advertising of patent pellagra medicines throughout the Southern states. The manufacturers of these preparations usually advertise in big headlines that their preparations will cure pellagra. These preparations are sold to these poor suffering people at a very high price, and when one considers that most of pellagra patients are found among people of small means the advantage taken of the sick and unfortunate by the manufacturers of these nostrums appears in its true light. There should be some way to put a stop to this way of robbing these unfortunate people.

Table of Patients Treated at the Davidson County Isolation Hospital.

Ages.	White		Colored		Total
	Males.	Fem.	Males.	Fem.	
1 to 10----	7	3	--	--	10
10 to 20----	1	7	--	--	8
30 to 40----	7	11	--	3	21
40 to 50----	6	18	3	1	23
50 and over	22	15	--	3	40
	43	54	3	7	107

We had a total of fifteen deaths. Of this number nine died within four days after being admitted to the hospital, and should not be counted in arriving at the death rate.

THE HOSPITAL SITUATION IN TENNESSEE.*

E. C. Ellett, M.D.,
Memphis, Tenn.

The hand writing on the wall indicates the early classification and regulation of hospitals. The agencies concerned in this are: First, the American Medical Association; second, the American College of Surgeons, and thirdly, various smaller and local organizations, such as the Committee on Hospital Efficiency of the Philadelphia County Medical Society. To the best of my knowledge the study of the hospital question has not yet been begun by the A. C. S.,

*Read at meeting of Tennessee State Medical Association, Nashville, April, 1915.

but it is part of their program and will certainly be undertaken. The results of the work of the smaller organizations referred to will probably be only felt locally, but the facts which they collect and publish will be of wider influence and of much value.

The A. M. A. has undertaken the study of the hospital question with the same zeal which characterized its handling of the medical college situation, and let us hope that it will be with equally good results.

The following observations on the hospital situation in Tennessee are the result of reviewing the matter in the capacity of a member of the Committee on Hospitals for this state, appointed by the Council on Medical Education of the A. M. A., in connection with Dr. George West, of Chattanooga, and Dr. Perry Bromberg, of Nashville. The information concerning the hospitals was collected by the committee, and as far as possible the institutions were graded. The committee acknowledged its indebtedness to Dr. B. B. Cates, of Knoxville, for valuable assistance. This work was begun about two years ago, and question blanks were sent to all the hospitals, filled out by them and returned to the Secretary of the Council on Medical Education. These blanks, with grade cards, were placed in the hands of the committee, and from the blanks, with the aid of such additional information as it was necessary to supply, the grade cards were filled out and returned to the Council.

In anticipation of some of the criticisms of our institutions, it should be remembered that the function of a hospital is not alone the care of the sick, but it should include also educational work with doctors, nurses and the public, in the prevention of disease, as well as in the scientific study of the causes and treatment of disease, and that a hospital is efficient in proportion as it performs these functions thoroughly and economically, with the least waste of labor, materials and money. The wasting of the time of the hospital trustees, of the medical staff and of the nurses, should be guarded against. A system of financial records and reports should be carried out that will enable the superintendent to give the trustees at frequent intervals and on short notice, information regarding the financial operation and status of the hospital, and the unit cost of the

work. Proper facilities for the medical staff will enable it to do its work promptly, effectively and quickly. The time of the nurses is saved when the one best way of doing their work is ascertained and taught, and they do not have to learn several less effective ways of doing it. The waste of money comes about largely in buying supplies. Sixty per cent of the cost of maintenance goes by this channel, and a great saving can be effected by buying through a central purchasing bureau.

There are many institutions in this state for the care of sick persons, but in this study and classification such institutions as orphan asylums, refuge homes, homes for the aged and incurable smallpox hospitals, popularly known as "pest houses," and private institutions for the treatment of drug habituees, are not included. The information concerns only those institutions especially charged with the treatment of the acutely ill, and the more especially does this first survey have to do with those which offer openings for interns. A total of thirty hospitals were reported on by the committee. Institutions were graded under ten heads, and classed as A, B, and C, according as they scored over 70, from 50 to 70, and below 50, respectively. The ten headings are as follows:

1. Buildings and grounds; light; heat; ventilation; repairs; cleanliness, etc.
2. General supervision; superintendence, etc.
3. Trustees; ownership and general conduct; whether conducted in the interests of the community and scientific medicine, or solely for the profit of the attending staff.
4. Medical staff; its organization, character, etc.
5. Intern service; existence of; proportion of to patients.
6. Nursing; training school for nurses; orderlies, etc.
7. Laboratory; Roentgen ray facilities, etc.
8. Records; histories; library, etc.
9. Out-patient department; emergency service; autopsies, etc.
10. Educational functions; teaching; research; influence on local profession.

1. *Building*.—The character of the buildings, whether of the pavillion or block type, how lighted, ventilated and heated are considered,

as well as the sanitary arrangements. No point was made as to whether the building is fire-proof or not, nor was the question of fire escapes and means of controlling fire touched upon. The pavillion type is the more expensive construction, but greatly to be preferred on the score of better ventilation and the greater possibilities in regard to porch room. One can only touch on the question of construction, about which volumes are written. The rating on buildings was as follows:

- Per cent, 100; number, 13.
- Per cent, 75-100; number, 7.
- Per cent, 50-75; number, 4.
- Per cent, below 50; number 2.

We should call attention to the fact that not all of the thirty institutions were graded under any one head, as information was not complete in any instance. Subsequent surveys will doubtless remedy this omission.

It is gratifying to note that nearly one-half of our institutions are suitably housed, for without proper buildings it would be hard to conduct a satisfactory institution.. The common custom of beginning a hospital in a remodeled dwelling is a bad one. In the first place the building is not suited for the purpose from a sanitary point of view, there is apt to be great waste of space and energy, and if a hospital has temporary quarters that can be made to answer, it defers the time when it will be housed in suitable and specially constructed buildings. This comment seems to be called for by the fact that one of the large religious denominations has recently acquired an old residence in one of our cities with the idea of starting a hospital therein.

Superintendent.—The following grades were made under the head of superintendent:

- Per cent, 100 (satisfactory); number, 9.
- Per cent, 75-100; number, 7.
- Per cent, 50-75; number, 2.
- Per cent, less than 50; number, 2.

Running a hospital seems to be a job which most hospital boards regard as Mark Tapley did that of washing a baby, namely, a thing that anybody can do. Expensive experience is demonstrating the fallacy of this belief, and when it is generally recognized that to conduct a large hospital efficiently requires not only talent, but training, we will get better results. A striking example of this is in the Memphis

City Hospital. After the usual run of political possibilities, including policemen, railroad conductors, steamboat captains, etc., had been tried, a trained hospital man was secured from a distance, with results that are most gratifying. The profession in Memphis keenly appreciate the intelligent manner in which the subject was approached by the present Hospital Commission, and especially the manner in which they secured a committee from the medical staff, with whom they co-operate, to the great advantage of the institution, in which we all take great pride.

There is one sub-head under "Superintendent" which we have neglected, namely, "Social Service." While some of the hospitals reported as having efficient social service, and for the present were credited with it, we doubt if a single hospital in the state is so provided. In the Memphis City Hospital this work is done by the Associated Charities, the District Nurses and nurses attached to the Juvenile Court and public schools. They do not work closely with the hospital. Effective social service must be in the hands of a social service department, and should be an integral part of the hospital organization and supported out of the hospital funds. Amateur social service is not satisfactory. The workers must be paid and real work required of them. Their duties pertain more especially to out patient departments, and to patients after leaving the hospital. They are supposed to obtain a social history of the patient, visit the dispensary patients in their homes to see that their methods of living are conducive to recovery from their disability, see that directions are carried out, that visits to the dispensary are made as directed, and in the same way they follow the discharged ward patient to his home, and exercise a similar supervision over him.

Revenue.—For the present a hospital is classed as having a satisfactory revenue when it meets its expenses, but it would seem that this is too liberal. and that no institution should be so classed unless it has an endowment or appropriation to care for at least most of its fixed expenses. Under this construction every hospital reported a satisfactory revenue.

Closely related to the question of revenue is that of expense, which is mentioned to call attention to the advantage and feasibility of

co-operative buying of supplies. This is made possible in various ways, but especially by the Hospital Bureau of Standards and Supplies of New York, whose members can buy any of the ordinary supplies, such as drugs, dressings, linen, etc., through the bureau, and get from them information of value in regard to those supplies which must be purchased locally, such as coal, meats, vegetables, ice, milk, etc. This excellent bureau has a rather small membership, and does not seem to be generally known. An organization could be effected in any city by the local institutions whereby the local buying could be done in a co-operative way, to great advantage, but as far as we can learn the hospitals seem to be all pulling in different directions and do not co-operate in any respect.

Medical Staff.—Ten of the hospitals in the state reported as having a staff of physicians in attendance. Presumably these are the larger institutions. In those which accept a variety of cases, no other arrangement can secure anything like decent attention, and certainly the need for a medical staff needs no defense. In small special hospitals one man may do the work, but since team work is getting to be more and more the solution of efficient medical service, there should be some arrangement whereby the greatest opportunity is afforded to enlist the services of experts in any and every line. Not only should this be possible, but each member of the staff should be on the alert to call on a colleague when conditions arise which would be of interest to a special worker, or in which the advice of a special worker would be of value. It is in this way that the large clinics and the large hospitals acquire an advantage over small institutions or the solitary worker, an advantage the latter need not fail to possess.

Too often the hospital staff is under political, religious or other influences which have a bad effect. Not only is it desirable that ability be the basis of appointment, but each one desiring a hospital connection should be required to serve in the more humble capacities first, and selections of the heads of departments should be made preferably from those who have worked their way up. Members of the staff should realize their obligations, and some system should be the rule whereby regular attendance

and diligent and honest service are required of every member.

Interne.—Fourteen hospitals in the state are reported as affording opportunities for internes, and the total number of places is forty-seven. This is entirely too small a number, and could easily be increased, and every man who graduates in medicine in the state should have an opportunity to secure a position as interne. Nearly all of the places are filled by appointment, a few by examination. This is not a very important matter, if there are a sufficient number of vacancies, but as it stands now a man of ability and other desirable qualities may fail to get a service. The service is usually for one year and rotating, which gives the interne a varied experience. No doubt one result of this hospital study will be to give us exact information as to the number of internes in proportion to the beds that a hospital should employ, as well as details concerning length and character of service. If a hospital year is to be required as part of the medical course we will, of course, have definite information regarding it.

Nurses are cared for in twenty-two institutions, most of which conduct training schools and give diplomas. A total of three hundred and thirty-six nurses are provided with instructions, which is not too large a number, since the demand never seems quite satisfied. From a considerable experience with training schools and their work, it would seem to me quite desirable to keep the course at two years except in the larger institutions, where a great variety of service can be given. To change a nurse from one floor of private rooms to another is no change of duty, but that is about all they get in small institutions. Unless they are housed in a building separate from the hospital, the question of the effect of the confinement on the physical health is a serious matter, and more especially is this the case since they are not allowed any time off for illness. A medical student is allowed 20 per cent of his time off, and surely a nurse should be given something, rather than have her keep at work when unfit for duty because she does not want to lose any time. We are not trying to teach them to practice medicine, and I never saw one yet who could be taught to be a nurse in any length of time if she

could not be taught it in two years.

Laboratories.—Eight of the hospitals do not maintain a laboratory. Fourteen maintain clinical laboratories, and eight clinical and pathological laboratories. A satisfactory laboratory should be capable of doing all the usual blood, sputum and urine work, make cultures, Wassermanns, vaccines, and cut and stain tissues. There should be maintained in close relation with it a pathological museum. A clinical laboratory would mean one where at least blood and urine and similar tests and cultures could be made, and yet some of the hospitals report "clinical laboratories" on the strength of a table in a corner, adorned with a few test tubes and an alcohol lamp. The urine could be tested for albumin, anything more than that would tax its possibilities. No hospital can arrive on such equipment, any more than a practitioner can justify not having access to the services of a competent pathologist. It is very gratifying to note that eight institutions report that they employ paid pathologists.

Histories.—No histories at all are kept in seventeen hospitals, poor ones in six, fair ones in five and good ones in two. In no other one respect are more of our institutions delinquent than in this. If the hospitals could only see that they owe it to themselves to keep these records it would be a great step, and the necessity of them applies to private patients as well as ward patients. If any one objects to his patients being interrogated by the interne he should be required to furnish the necessary information himself. The question of the hospital requiring the histories is brought out because long experience has shown the futility of depending on the staff for them. Very few physicians keep any record of their cases, and it is not to be supposed that they will do so with those patients who happen to be in a hospital. The details of history taking needs no special notice, except that it should include as routine the examination of the urine, heart and lungs, and a smear, at least, of any discharges. It seems probable that a blood count should also be a part of the routine. The value of these is very great, not only to the hospital but to the patient, to the physicians and to the in-

terne. It may be worth a great deal to a hospital to be able to prove by a written record that certain examinations were made, in the event for instance of a fatality from an anesthetic, salvarsan, etc. To the patient it insures a thorough overhauling, with the possibility of overlooking important facts reduced to a minimum, while the educational value to the interne is very considerable. In the matter of physical examinations it would give him good practice in that most important matter, recognition of normal conditions. Good records are absolutely necessary to give a teaching value to the hospital work, and to afford a basis for comparison of different methods of treatment. The only excuse for not having them is laziness, yet that excuse is so potent as to prevent all but two hospitals in the state from making a creditable showing in this particular.

With the advantages that all of our resources can give us in diagnosis, a certain number of mistakes must continue to occur and a certain number of more or less calamitous events to happen. Careful routine will enable us to avoid many of them. The educational value to the attending physician of good histories is very great, and when he finds the comfort that arises from visiting a patient and finding the history written, a physical examination, with urine, sputum, and blood count included, already recorded, he is apt to adopt some such plan in his private work, to the credit of his profession and the benefit of his patients.

Out-Patient Department.—Five hospitals report having out-patient departments. In some of them this defect is more apparent than real, as for example in the City of Memphis, the Baptist Hospital is next door to, and the City Hospital across the street from, the University of Tennessee, where daily outdoor dispensaries are operated in all the departments of medicine. It is very desirable for a hospital to have such a department of its own, or at least within easy reach, for two reasons, namely as a feeder for the hospital wards, and as a place where patients can receive proper care after leaving the hospital. This need is especially great in certain of the services, such as dermatology, eye and ear, etc., where many of the patients are ambulant

and do not need hospital treatment. The more a hospital caters to pay patients, and the less to those unable to pay, the less will this need be felt and the less will it be met.

Teaching.—Teaching of medical students is conducted in six hospitals. At present medical schools exist only in Nashville and Memphis, so that the hospitals in other cities are naturally not asked to admit students. As this is one of the functions of a hospital, ours fall short in this respect. A great deal could be done in those hospitals where medical students are not admitted by making physicians other than the staff welcome and encouraging them to observe the work in the wards. The educational opportunities in such a course are considerable and would be to the advantage of the staff and visitors alike. The maximum efficiency is attained as a rule in teaching hospitals. The cases are worked up better, and the examinations, records and treatment are more carefully conducted, since those in charge are on parade, as it were, and their conduct is subject to constant scrutiny and criticism.

In grading the hospitals of this State, it was found that only two of them are entitled to rank in Class A, and it is interesting to see that these two are closely connected with teaching institutions, and their wards are practically controlled by the faculties of these colleges. The low grading of the other hospitals emphasizes, as did a similar inspection in the case of medical colleges, the need of inspection, constructive criticism and reform. While we have some creditable institutions, we have others that are disgraceful, and publicity is the best cure for their ills.

In conclusion, let me briefly quote a few important things for the consideration of those concerned in hospital management:

1. An appreciation of the functions of a hospital, namely, care of the sick, prevention of disease, and education of doctors, nurses and the public.

2. An appreciation of the fact that the conduct of a hospital is a man's job, not to be carried on by someone as a side line, nor as an occupation for his declining years, but a thing to be entrusted only to a trained man or woman.

3. An appreciation of the fact that the

keynote of success is efficiency, and the fundamental idea in efficiency is the elimination of waste.

DISCUSSION.

DR. PERRY BROMBERG, Nashville: I regret very much I did not have the pleasure of hearing the first part of the paper. However, I enjoyed that part of it which I did hear. Dr. Ellett is to be congratulated for being the first man to bring before the membership of our Association a subject which I regard of vast importance. I certainly think efficiency experts should be had in all departments of public institutions, and I believe that a report from an efficiency expert in the regulation of hospitals would be especially enlightening. Dr. Ellett's remarks have brought to my mind many things that are lacking in institutions in general. I simply rise to commend everything he has said in his very excellent paper, and can add but one thought to it. I do not know whether the doctor mentioned it in connection with hospitals or not, and the feature is the encouragement of more frequent autopsies. This feature should be encouraged in connection with hospitals in this state, and I believe in the South as a whole we are lacking in our resort to this important educational advantage. Certainly autopsies are not encouraged, and many times are not taken advantage of when they could be readily obtained. So much is this the case that we are almost afraid in many instances in private institutions to ask for the privilege of an autopsy, and we have not until recent years in a few hospitals taken advantage of the opportunity to hold an autopsy when we could. I believe if we had some means by which autopsies could be forced, one of the questions brought out by Dr. Newell's paper, it would go a long way to solve the question of diagnosis. In Vienna, at the University of Austria, it is compulsory for patients who die in the university to be subjected to autopsy; and it is quite rare to get a diagnosis in less than one week. It requires this length of time to make a correct diagnosis in the majority of obscure or difficult cases. When the diagnosis is subjected to verification by an autopsy, it will be found to be correct in a very much larger percentage of cases than has been found by Dr. Cabot in his recent analysis of the results in Massachusetts.

The doctor is to be commended for calling our attention to the defects of our hospitals, both private and public, and that they are faulty cannot be questioned. There are many advantages that could be had by the proper regulation of a hospital if they were all pulling together by having some efficiency expert rather than pulling in opposite directions, which is the usual rule. Until within recent years in the City of Nashville, with large modern hospitals, we have had rather inefficient pathological de-

partments, and in two of them certainly, I am almost ashamed to say that we have had no radiographic advantages. In recent years X-ray laboratories have been put in. They have improved in that respect, but laboratory facilities, both clinical, pathological, and radiographic, in these hospitals in this city have been frightfully lacking. The doctor has correctly stated that hospitals in connection with teaching universities are probably the best equipped. They keep better histories; they give patients a better examination and far better treatment, far more modern and scientific service than do hospitals which are not connected with teaching universities. The management of city hospitals has always been, in a measure, more or less political, and I do not know how they are going to manage to keep them from being otherwise than political. It certainly is a problem difficult of solution because there are many men of many minds.

I wish particularly to commend this paper. So far as I know, the defects of our state institutions have been brought to the attention of our society by no one so vividly as has been done today, and I wish to congratulate Dr. Ellett upon his paper.

DR. MARCUS HAASE, Memphis: There is so much in Dr. Ellett's paper that is worthy of discussion, that one can hardly go over the matter in the five minutes allotted to him to discuss it.

I wish to say a few words in regard to the City Hospital in Memphis. As Dr. Ellett has told you, at one time the management of the hospital was in the hands of politicians, ex-policemen, steamboat engineers, boat masters, ex-market-house keepers, but today it is under the management of a Board of Trustees. The entire hospital department, that is, the departments of the city government, is under the management of a Board of Trustees, and I can safely say there is no politics in the City Hospital today. The Board of Trustees of the hospital select a superintendent, who is, fortunately for us, a trained man, not from the City of Memphis, but selected outside of the City of Memphis. The Board of Trustees selects a medical board and gives them the power of nominating the whole staff. For eight months in the year the staff is composed of professors and associate professors of the Medical Department of the University of Tennessee. During the summer months there are those who are connected with the university in a minor capacity and are selected for four months. In the City Hospital the staff is composed in this way: To make team work as efficient as possible, we have adopted the plan, first, of having consultation blanks. History taking is carried on during the winter months by a clinical clerk sent from the college, but the senior intern on that service is held responsible for the histories, and because the clinical clerk writes the histories it does not relieve the senior intern of the responsibility of those histories. These histories are taken by the clinical clerk, are gone over by the senior intern in the hospital, notes are added to or corrections made, the chief of service makes such

corrections as he wishes to or notes of his first visit to the hospital, and notes are made on the first history. You can readily see why men are exceedingly careful in writing up case histories, because they are subjected to the scrutiny of so many different men. We have consultation blanks in order to make the work of the staff more efficient. These consultation blanks are placed on the record of the patient, with a request for other men in other services to examine patients for certain conditions. They must write the answers at the bottom of the consultation blank. You can see how careful the consultant must be in writing his findings, because again this record comes under the observation of so many different men. When the case is finished the discharge blank is placed on the outside of the records, and the senior intern on that service must write up in a brief manner all that has been done for this particular patient, and then that must be approved by the chief in that service. You see how in this way we get a most complete history under the observation of any number of different men, and how carefully such histories are taken.

Under present conditions I say advisedly we are exceedingly proud of the work that is now being done in the hospital in the City of Memphis.

DR. W. M. McCABE, Nashville: I have had some years' experience in the management of a hospital. I do not believe any man can be an hospital efficiency expert who is not a physician. One would not think of allowing a laborer to run a steam engine. Then why place a layman at the head of a hospital? We have found in our experience that interns and nurses are hard to discipline, and are adverse to obeying orders from anyone not a physician. We believe there should be a dual system of management, namely, the superintendent should be a physician of experience capable of doing medical and surgical work, and should make daily rounds with his interns. The purchasing of non-medical supplies should be left in the hands of a steward, but all purchases should be subject to the approval of the superintendent.

I disagree with Dr. Ellett when he says nurses can be trained in two years. It must be remembered that these women have a great amount of work in the performance of their duties, and have very little time for didactic work and study. The supply of nurses is not any too great, and if we graduate nurses every two years we would not have a sufficient number to run the institutions. The municipal institutions in this state which are giving a three-years course are laboring under a great handicap. Women are human and unless advised are going to small infirmaries where they can complete the course in two years with very little exertion. This method, I believe, is detrimental not only to the nurse, but also to the infirmary.

All municipal hospitals are to a more or less degree under political influence. The plan adopted by the City of Nashville is a most excellent one, and eliminates politics as much as it is possible to do so.

A Board of Hospital Commissioners consisting of five laymen were elected by the City Commission, and can only be removed for cause. They do not receive compensation. They elect the superintendent, appoint the staff and are responsible for the conduct of the institution. The superintendent appoints interns, and all other employees. He is under civil service and responsible only to the Hospital Commission.

I do not believe the management of a City Hospital should be required to go each year and beg the City Commissioners for money to treat the sick. All institutions of this kind should be supported by a special tax levied for the specific purpose, and bringing in a sufficient amount to maintain the institution in a first-class condition. A tax levy of one-twentieth of a mill in the City of Nashville would bring in \$60,000 per annum, and the hospital would be upon a most excellent financial basis.

DR. C. P. M'NABB, Knoxville: I can add nothing of value to the excellent paper that has been read on hospital management; but there are two or three points suggested to me in the discussion. In the first place, I have been connected more or less with hospitals in Knoxville for many years. One of the things that has been mentioned is that the student nurse has to make up all lost time for sickness. That is a matter I have always fought, and it has been a losing fight. I remember very well on one occasion, when I went to the superintendent of one of our hospitals and asked him to allow a nurse a couple of weeks' time she had lost during her training on account of sickness, but the request was promptly refused. The medical student is allowed 20 per cent of his time, while a nurse under training has no time allowance, or she cannot lose any time she does not have to make up before graduation.

Another thing that I think is unnecessary. The medical staff give regular lectures to these nurses on anatomy, physiology, chemistry, materia medica, the diagnosis of disease, etc. Nurses are not going to be physicians, and why give them such lectures. It is much better that they should have lectures on domestic science and on dietetics, and how to apply surgical dressings, how to give a dose of medicine, and the possible effects of medicines.

Just a word with reference to the proposition made by Dr. McCabe of having a board of commissioners for hospitals. I do not believe that I could ask a better witness than our president in saying that is about the worst thing that can happen to any hospital. Let me tell you, the learner you can concentrate responsibility on one man's shoulders the better service you will get. In the Knoxville General Hospital, since one of the city commissioners has been responsible for its management, the management has been more efficient than we had when it was under the control of a board of governors. A board of commissioners or a board of governors that is self-

perpetuating is the worst thing that could happen to any hospital or any other institution.

DR. WILLIAM KRAUSS, Memphis: The day of the standardization of hospitals has arrived, and those who contemplate the establishment of a hospital or the forming of a hospital organization might as well right now figure upon the future necessities or else they will be erecting a hospital and be unable to meet the requirements according to the schedule Dr. Ellett has laid down in his paper. We need not waste much time upon academic discussion, but more upon system and standardization. In one case it will work better in one way, and in another case another way. The mistakes that are usually made with respect to a city hospital are that the institution is used as a political asset for the purpose of furnishing employment to ward heelers, and a sectarian hospital is an institution that furnishes shelter and religious solace to patients, which, in the proper sense, is a sheer waste, because there is no prevention of disease, no utilizing of patients for instruction, and no effort at rapid restoration of patients. I think everybody must go home with the idea that we have begun a work that must be pushed through.

DR. ELLETT (closing): There is just one word I would like to say in regard to nurses and their training. In a large institution, and to speak of one with which I am familiar, the Memphis City Hospital, the nurses can be given surgical training, medical training, obstetrical training, a training in caring for children, and a course in the Isolation Hospital for contagious diseases, and finally a course in the operating room. In a small hospital of say fifty beds, if you keep a nurse in that institution for three years, you are wasting a year of her time, for what she cannot learn in such an institution in two years, she will not learn in twenty years. You can change her from one floor of private rooms to another, or change her from day duty to night duty, but there is no real change of service.

A REPORT OF CASES OF REMOVAL OF FOREIGN BODIES REMOVED FROM THE LOWER RESPIRATORY TRACT AND THE OESOPHAGUS.*

W. Likely Simpson, M.D.,
Memphis, Tenn.

About one year ago I reported several cases of removal of foreign bodies of the trachea, larynx and oesophagus, and since that time I

*Read at meeting Westn Tennessee Medical Association, at Dyersburg, 1915.

have had quite a number of cases, some of which, it seems to me, are of unusual interest, and it is to these that I invite your attention.

The first three cases are foreign bodies of the trachea and bronchi.

Case No. 1. M., boy six years old. Referred by Dr. Dulaney, of Dyersburg.

History previous to first visit:

Fourteen hours ago, while blowing grains of corn through a quill, inhaled a kernel into trachea and since that time breathing labored. When I saw him at the hospital his temperature was normal and color good and nothing special to be heard over the chest.

Chloroform was given and the kernel located in the right bronchus. After several attempts the corn was removed. The kernel was too large to be taken through the tube of the bronchoscope, so it was lost from the grasp of the forceps twice before it was removed, by taking tube and all from the trachea. (See Figure No. 2.) Patient made a good recovery in two or three days.



Case No. 2. Margaret D., age seven years. Referred by Dr. Harry Minor, with history of having inhaled a top off of pencil about twenty hours ago, and states that breathing has been bad, feverish, etc. As I saw the patient the color was good, rather difficult breathing, but nothing alarming. The X-ray plate and fluoroscope showed the foreign body almost to the fifth rib and to the left of the median line one and a half inch. Under chloro-

form and ether, after considerable difficulty, the foreign body (See Figure No. 3) was located very deep in the left bronchus at the second bifurcation filling the whole lumen so tightly that forceps could not be made to grasp the foreign body, but by opening a point (Figure) within the lumen of the foreign body it was removed without difficulty. The breathing became very difficult about twenty hours after the operation, and it was necessary to intubate the larynx. After this the course was perfectly satisfactory.

Case No. 3. Baby F., age one year, was brought hurriedly to my office with a history of having had some difficulty in breathing for eight weeks. About one week ago one of my colleagues made a bronchoscopic examination, and again two days ago. These examinations were made in the hospital and the mother took the patient from the hospital without the consent of the attending physician three of four hours ago. Since leaving the hospital the child's breathing has been alarmingly bad, so that the mother returned to Memphis on the first train possible.

The condition of the child when it was brought to my office was rather bad. The breathing was rather labored, the color was pale and bluish and the pulse very rapid. The child was quickly taken to the Baptist Hospital and an intubation done. The respiration was soon almost normal, and in two days the intubation tube removed, and in four days the baby went home well.

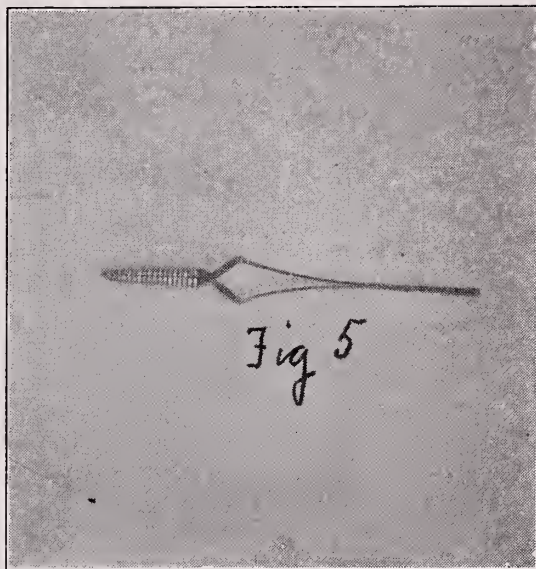
The foreign bodies in case one and two were rather difficult to remove. The grain of corn in case one was like a great many foreign bodies in the bronchi and trachea, too large to remove through the tube and it was also difficult to hold with the forceps, as it was so smooth and hard. The forceps point (Fig. 5) opening within the lumen of the foreign body, enabled us to remove the pencil head after a failing to grasp it with the ordinary forceps.

Case two and case three also show us how necessary to keep these patients in the hospital till all danger of oedema of the larynx is past, as these both had to be intubated to save them.

Case No. 4. J. G. A., age fifty-five, male. Referred by Dr. McMahon, with history of having choked on a piece of chicken three hours ago. Throat has been painful and patient has not been able to swallow within this time.

On examination with a large tube under cocaine a very large piece of chicken flesh and cartilage was found at the upper end of the oesophagus. (See Fig. 4.) The flesh was removed in several pieces and the whole length of the oesophagus searched for a piece of bone, but nothing was found. No tumor or stricture of any kind was present. It was about ten days before the throat was in a normal condition.

Case No. 5. Fredrick A., age seven years.



Referred by Dr. Francis, with a history of having a buffalo nickel in mouth two days ago, which became lodged so that swallowing is not possible.

The X-ray and the fluoroscope showed the nickel at the upper end of the oesophagus. Under chloroform the nickel was seen, but in sponging the mucous away the nickel was dislodged into the deeper part of the oesophagus. The fluoroscope was used and the nickel located half way down the oesophagus, but as the oesophagoscope was passed and the nickel again seen, the nickel slipped into the stomach before it was possible to grasp it with the forceps. The nickel was passed four days later in the stool. (See Fig. No. 1.)

Case No. 6. Will Lewis, age forty-five years, came to my office with history of having eaten fish four days ago. At this time a piece of bone cut his throat and caused a slight difficulty in swallowing, but for the last three days has only been able to swallow liquids. A small

amount of food can be retained and later vomited.

With the oesophagoscope the bone is viewed lower down in the oesophagus, but he was such a poor patient that he was sent to the hospital and the oesophagoscope passed after the use of morphine and cocaine. The bone was located and demonstrated to the house staff of the hospital, and just as I was reaching with forceps to grasp the bone it disappeared into the stomach. No further trouble was experienced.

Case No. 7. A. B. J., age thirty years, came with history of a piece of chicken bone having lodged in the oesophagus. Spasms of pain came on every four or five minutes.

The patient acted so badly at the office that he was sent to the hospital, and under ether the oesophagoscope was passed and a small bone was viewed deep in the oesophagus, but slipped into the stomach as the forceps were passed to grasp it.

The three oesophageal cases demonstrated how easy it is to dislodge foreign bodies in the oesophagus and how easy they evade the forceps, especially if the patient is not quiet or the regular assistant is not present or if large quantities of mucus are present. In some of the three oesophageal cases did I have my regular help, and I feel that if I had, these foreign bodies would have been removed easily with the forceps. As far as the final results are concerned it does not matter, as a rule, if small foreign bodies do go into the stomach, but it would be much more satisfactory to remove them through the oesophagoscope.

Case No. 8. Dr. J. M. C., age forty years. Referred by Dr. Crisler, with a history of having swallowed lye when a small child and since this has had a stricture of the oesophagus.

Yesterday morning while eating a piece of meat a small piece lodged in the oesophagus, and since then has been unable to swallow anything at all. Has not been able to swallow coarse food for a long time.

At the hospital, with ether, a very tight stricture two inches long was discovered high up in the oesophagus. No definite foreign body was discovered, but small probes were passed through the stricture. The small oesophagoscope could not be passed through the stricture.

The following day liquids could be taken. Special dilators were made and passed through

the stricture and now he can swallow better than ever and the prospects for improvement good.

The last case shows what can be done with stricture cases with foreign bodies lodged in them. The treatment is very prolonged, but the results justify the time and expense.

In all of these cases the Kahler modification of the Bruning Instrument was used. The Killian Suspension Instrument was not used.

No attempt has been made in this paper to cite all the cases in which the bronchoscope and oesophagoscope were used, but simply some of those cases calling for more urgent treatment.

EUGENICS AND MARRIAGE.*

A Treatise Upon An Important Phase of Social Hygiene.

By Lee Alexander Stone, M.D.,
Member American Anthropological Association,
American Genetic Association,
Southern Sociological Congress.

"Know thyself; be thyself; think anywhere. Discuss with others. Be definite in your thinking. Think to a purpose."—Socrates.

"I am and I have a right to be."—Mary Wollstonecraft.

Introduction.

A great many people are of the opinion that Eugenics and Social Hygiene are separate topics and should be discussed as such.

This is a mistake, for they are closely allied, and one cannot be properly referred to without touching closely upon the other.

The Eugenist and Social Hygienist should be in every sense what the term implies, a humanitarian, for without possessing a broad humanitarian viewpoint he cannot hope to succeed in replacing many of the foundations in our present-day civilization that have be-

*This article is a compilation of papers read before the Nashville Academy of Medicine, Memphis Medical Society, Chattanooga Academy of Medicine, Knox County Medical Society, and Southern Medical Association.

gun to crumble under the weight of buildings of faulty construction. Foundations of knowledge must be made strong if men and women and boys and girls are to be expected to reach the very pinnacle on which is placed the compass that will guide the ship of intellectuality into a safe harbor, so that its cargo may be disposed of to the best advantage, and bring the price that should be paid for knowledge that will aid, not only present generations, but those yet unborn.

Some, unfortunately, have been preaching the doctrine of fear, trying to frighten individuals into doing right by placing before their eyes horrible pictures of the abnormal and pathological. They seem to have forgotten that abnormal and pathological conditions do not predominate, but are in the minority, and that normality is the controlling element in nature which directs the actions of men and women and causes them to develop mentally and spiritually. Nothing was ever gained by teaching that unless one does so and so, according to doctrines laid down by some individual or set of individuals, they will be punished and endure untold agony in the future. This very doctrine of fear has caused a great many to prophesy the ultimate downfall of the teachings of Social Hygiene. If fear is to be the controlling factor in the minds of teachers of Social Hygiene, it would be better to stop all talk and let our present system of hypocrisy and chicanery continue to exist.

William Marion Reedy has said that "it is sex o'clock." He is right; it is "sex o'clock;" already have the hands on the dial of the clock of destiny begun to point to a new era in our civilization. Society is ready to lay hands on the false structure it has builded in the past. Its members are being prepared for the crash that will mark the downfall of tradition and superstition, and the birth of a new ideal that is destined to precede a change in social conditions. The dead lumber room of yesterday is being piled high with cast-off standards which have been for so long established around mock modesty and prudery, and from which secret vices have so frequently emanated.

That the members of modern social systems have not been willing to recognize the ever-

ruling sex instinct is unfortunate. It always has been the controlling power. Without the controlling elements of sex, society and civilization would never have developed. Everything would have remained just as it was in the beginning, cold and passionless. The creating of human beings of opposite sex caused man to aspire to the establishment of higher ideals; this ambition resulted in a fixed determination to excel. Men and women became controlled by sex hunger; thus may sex hunger rightly be called the creative impulse toward an ideal.

If man had never been hungry for woman, and if woman had never been hungry for man, none of the finer traits of human character could have been developed. Love, art, music, poetry—in short, all the finer qualities that have gone so far towards making life beautiful, could never have existed. Nothing would be known of religion, and human beings never would have felt the need of the exaltation that comes with it, had they not been controlled by sex hunger.

Just a word about sex discussion: There must be in all sex discussion a dissociation of the terms sexual and sensual. Sexual matters are the result of physio-psychic love and a desire for offspring, with a feeling that there can be no peace of mind for the male and female unless they can be joined together by the bonds of conjugal joys; while the sensual marks a desire for erotic pleasures to be obtained from sexual congress out of lawful wedlock, without an ambition for offspring or marriage. Sensuality destroys love and allows only lust and desire for fleeting pleasures to control the intellect and the better and saner judgment.

The sexual life is as holy as well as a socially necessary one, and to look on the discussion of those subjects that will produce a higher race in the future as being unclean is foolish in the extreme. No harm can possibly result from discussions of sex questions if they are reverently entered into and discussed intelligently and from a scientific standpoint. Hysterical discussions by those who are not acquainted with their subject should be forbidden. Fortunately, all discussions and questions involving the development of a higher ideal come out from under the in-

fluences of radicalism and sentimental hysteria unhurt. The pendulum of common sense eventually swings away from false alarmists who cry "wolf, wolf," when there is no wolf.

During the nineteenth century, when philosophers and scientists were in the most profound doubt as to what to do with the social problems which were in rapid succession presenting themselves for solution, the Great Galton was born, and from his ingenious mind was evolved the earliest logical schemes for the improvement of the race. He it was who gave to the world not only the term "eugenics," to replace the older and less comprehensive one "stirpiculture," but laid down rules, which, if consistently followed, would so regenerate the great masses of society that a new order of things and a new and better order of men and women would be developed, redounding to the credit of the entire human race.

Eugenics has become a common term, and its application to the betterment of mankind is being discussed in universities, colleges, schools, churches, in the secular and religious press, and in the home. Indeed, it has become the chief topic of the day. Even the less widely informed of the public are giving the subject earnest attention.

Not only biologists and zoologists, but men of medicine and the clergy, as well as the more intelligent laymen, are giving the subject of the future improvement of the race great consideration, and are seeking for the best possible means to better the generations that are to come—generations on whose shoulders will fall the responsibilities of state and the physical, moral, ethical and economic welfare of this great nation.

In discussing this important topic, many have discussed it thoughtfully and sanely, while others, perhaps well meaning enough, but mistakenly, have strayed from the direct paths of logic and common sense and have offered all kinds of solutions for the manifold and many angled problems that even this early have presented themselves.

Ultra-biologists and zoologists virtually have suggested the establishment of certain rules, which, if arbitrarily enforced, would result in an over-production of human beings; who, however closely they might approach the

physical ideal, would be utterly devoid of intellect or any semblance of higher mentality. In effect, they propose to maritally bring together men and women in whom there never has existed that physio-psychological condition known as love, which alone leads to the union of two human beings of opposite sex in perfect physical and psychical accord. Unconsciously, perhaps, they would attempt to destroy by such arbitrary and unintelligent mating the desire of human beings to produce a being like unto themselves, who should even excel the parents in both physical and mental attainments.

Such mistaken social philosophers would produce by their direct method of breeding, defectives, by using practically the same means to develop mankind that are now used to improve plants and animals, in whose lives, so far as we know, there never enters any element of psychology except, perhaps, that which is existent to a degree in all animal and plant life. They do not seem to comprehend that human beings are far removed from animals and plants by the possession of intellect or mind, with an ability to think and act for themselves.

It might be well to mention that our knowledge of psychology, as far as birds and animals is concerned, has been greatly added to by investigators within the past few years, and the man and the woman who expects to marry would do well to read some of the investigations that have been made. They would learn a great deal that would be of immense value to them in after years. Especially would they learn one of the greatest lessons of life—fidelity of purpose—if they would study something about the matings and lives of birds and other fowls. They undoubtedly possess great ability to love and remain true to one mate. It is also a notable fact that they render each other marked assistance in the rearing of their offspring.

As already stated, mistaken social philosophers would produce a race of mental defectives. If permitted to work out their theories, intellect would in time give place to the hammer of the stone age and men and women would become the great physical beings they were in former ages, completely covered with hair and fighting and scratching

for physical supremacy, with never a thought for the future development of a higher race. In brief, social reversion would occur.

It is the lofty purpose of eugenics to build up—not tear down.

Books in large numbers, and of all sorts, are being written to educate the young along lines leading to sex health and purity; works on eugenics abound; yet it never has been my pleasure, even after searching a multitude of both popular and scientific treatises, to discover a single work devoted to broadly educating the man and the woman of mature mind in Social Hygiene, with the possible exception of "The Task of Social Hygiene," by Havelock Ellis.

A host of men and women are marrying daily in absolute ignorance of their duties towards each other. Especially is this true of their sexual relations. They have been for so long bound down by the bonds of tradition and prudery that the precept "Know Thyself" has no meaning for them.

There is a crying need for plain unequivocal instruction, which, instead of traveling in a circle, will start straight towards the center and tell the truth in plain, unvarnished English.

It has been my pleasure to compile from many sources, expressed herewith under the caption "Eugenics and Marriage," a brief treatise, which I hope will be of signal benefit in explaining an hitherto mysterious subject in its application to the marital relation.

I have devoted some attention to the evils that result from association with prostitutes. I believe that more knowledge along this line is urgently needed, and I sincerely hope that what I shall say will in some measure assist in disseminating it.

CHAPTER I.

Eugenics, from a Greek term meaning well born, is that science which teaches people of all races how best to improve generations to come and develop a higher and more harmonious state of mental and physical perfection of human beings by teaching better methods of breeding.

This treatise will not deal exhaustively with the subject of eugenics, save insofar as the science will tend to produce more perfect

children by its practical application to marriage. The perfect mating of two beings of opposite sex in ethical wedlock will produce the uniformly perfect human being of the future, and, in so doing, a higher civilization.

Without physio-psychic love it will be impossible for a higher order of beings to be born. The perfectly mated pair, who are at all times in accord with each other and in whose thoughts centers a desire to bring into the world beings like unto themselves, who yet shall excel them, are the persons on whom the world should depend for the production of the great men and women of the future.

The ideal marriage is that in which there is a blending of two souls to make more perfect the soul of the one who is yet to be born. When nature gave the world beings of opposite sex she made possible this ideal soul creation through the evolution of man.

Heredity, of course, plays a big part in the development of the lives of children, and the influences of heredity and eugenics are parts of each other. It is to be hoped that in the near future the unfit can be eliminated from society by sterilization, thereby preventing defective men and women from becoming parents of equally, or more, defective children, who would only follow in their footsteps. Thus only can man hope to secure a line of perfect ancestors that may be looked back upon and viewed with pride. I will later attempt to indicate briefly, in a general way, the advantage to be gained by sterilization of the unfit.

Havelock Ellis has this to say about the perfecting of the race in the future: "Human breeding must proceed from impulses that arise, voluntarily, in human brains and wills, and are carried out with a human sense of personal responsibility." He also says: "Eugenics constitutes the link between the Social Reform of the past, painfully struggling to improve the conditions of life, and the Social Hygiene of the future, which is authorized to deal adequately with the conditions of life because it has its hands on the sources of life."

Professor Charles B. Davenport, who, perhaps, has done more work along eugenic lines than any other American, says regarding the general program of the Eugenist:

"The general program of the Eugenist is clear—it is to improve the race by inducing young people to make a more reasonable selection of marriage mates; to fall in love intelligently. It also includes the control by the state of the propagation of the mentally incompetent. It does not imply destruction of the unfit either before or after birth. It certainly has only disgust for the free love propaganda that some ill-balanced persons have sought to attach to the same. Rather it trusts to that good sense with which the majority of people are possessed and believes that in the life of such there comes a time when they realize they are drifting toward marriage and stop to consider if the contemplated union will result in healthful, mentally well-endowed offspring. At present there are few facts so generally known that they will help such persons in their inquiry. It is the province of the new science of eugenics to study the laws of inheritance of human traits, and, as these laws are ascertained, to make them known. There is no doubt that when such laws are clearly formulated many certainly unfit matings will be avoided and other fit matings that have been shunned through false scruples will be happily contracted."

Lydston says: "Intelligently select a mate, then fall in love."

How often in the lives of human beings does the question of the actual meaning of life and its reproduction prove a stumbling block in their path! Why, through all the ages, has ignorance with regard to self been permitted to exist? Why is it that anything biologically normal, such as the sex impulse that is born with and remains as a part of one's being, should be looked upon as unclean? Are not the results of the sex impulse, children, enough to raise it to a pinnacle of worship rather than to lower it into the bottomless pit of abuse, of shame and of iniquity?

All life, all human questions, whether they pertain to the state or to the church, whether they are questions of economics, politics, science or religion, are solely dependent on the sex impulse to create beings who will carry out for all time to come the basic principles and teachings of each.

When woman at the beginning of the Christian era became a servile and cringing

creature, always ready to bear any burden or submit to any abuse her lord and master chose to inflict upon her; when her sex became a thing apart from her social life and an unclean factor in the eyes of the law, false modesty, sex hypocrisy and prudery were born. Man's biologic, social and domestic partner was made to hide her charms, and she became the victim, not of monogamy, but of brutish and cruel systems built up by priests who were in absolute power. She was regarded as being like any female animal, fit only to reproduce her kind and serve as a bond servant to grant any whim or fancy her lord and master chose to demand of her. As a consequence of this idea, which, unfortunately, even today predominates to a very large degree, women have been viewed as being, and have largely become, creatures of mediocre intelligence, fit only for reproduction and sexual and sensual gratification.

Prior to this period the sex impulse was regarded as holy, and nothing was known of modesty or prudery, in the sense in which these terms today are understood. Men and women worshipped at the shrine of purity, both in thought and mind, and to regard the function of reproduction as unclean or indecent never occurred to them. Their sole idea was to worship man, and that which man could produce as the result of his mental or physical ability. They were in every respect idealists who never allowed the profane or impure to influence them or their actions.

It is true that commercialized prostitution had been in existence for centuries before the Christian era; but even so, prostitutes were able to command a certain respect. A close study of ancient prostitution will reveal to the student a condition very different from that which exists at the present time.

I hope my discussion of "Eugenics and Marriage" will not offend the delicate sensibilities of my readers, who belong to the great masses of society which for so long has been compelled by environment and tradition to taboo all mention of sexual matters. I probably will shock some because of my plain and direct expressions, and I hope that after the effects of the shock have worn off an entirely different view will develop in their minds as to what constitutes immodesty. Possibly,

also, I may free their minds from prudery. It is absolutely necessary to shock some people before they can be made to comprehend that the time for their awakening is at hand, and that, if they would develop, they must lay aside hide-bound traditions and emerge from the hot-house environment in which they have been brought up and change their views, or drop back into the ruts which have been made by false standards of morals and ethics.

It is not the province of this brief treatise to discuss pathological or abnormal material conditions. A discussion of this nature belongs entirely to the realm of science. Perversions and abnormalities are so infrequent as to have no place in literature designed for reading by those who seek personal instruction and not a scientific training.

"Without sexual desire, and the act which gratifies it, the human race would soon become extinct. Procreation would be impracticable. All ambition, endeavor and affection, all poetry, art and religion—in short, all the emotions and achievements inspired by love would cease, and humanity would become cold and passionless."*

The vast majority of men and women are blind to the importance of the sexual nature in its relation to the affairs of the world. They fail to understand that except for sex-love they would not exist; that the well-spring of happiness and human life would dry up, and that the foundation of society, therefore, would be destroyed.

Physio-psychic love is nothing more than a manifestation of the sexual instinct, dominated by the higher faculties of the mind. The sexual instinct is the universal animating impulse of all organic life.

"Man and woman are reluctant to admit the existence of sexual desire when wooing, and would blush at its mention and deny its existence. Yet, at the same time, the desire is there to be gratified after the law has made them husband and wife."

The teachings of God, as recognized by all theologians and men of learning, as bearing on procreation of the species, declare that the existence of the sexual desire is necessary, and that procreation or transmission of life

from one generation to another must wait upon the gratification of that desire.

The begetting of children has been the holiest aim in life since the dawn of creation. For a woman to be barren and bear no children once was regarded as worse than death. The Jews believed a curse had been put upon her. Fear of dying without issue led their women sometimes to resort to subterfuges and impositions; hence, Lot's daughters committed incest with their father while dwelling in their secluded abode in the mountains, "because there is not a man in all the earth to come unto us"—Gen. 19. The begetting of children was the highest aim in their lives, and, after they were secluded in the mountains, the fear of barrenness came upon them, so that they resorted to subterfuge and deceit to bring into the world beings like unto themselves, and thus obey the will of the Almighty.

"The creative act is man's incomparably greatest pleasure, and produces the most wonderful and prized results—a new being like himself."

"It was on account of their high regard for the creative act, and what it produced, that man in primitive days worshipped the male organ of generation as a god. The phallus was regarded as the incarnate source of being, as the embodiment of the power on the part of man to create a new being. Therefore it was looked upon as the Author Life, and worshipped as such."

The holy reverence for the organs of generation is exemplified in the book of Deuteronomy, where Jehovah himself ordained: "He that is wounded in the stones, or hath his privy member cut off, shall not enter into the congregation of the Lord."—Deut. 23:1. The manner of administering an oath among the ancient Hebrews was by placing the right hand between the thighs of the male, upon the genital organs—exactly as today we require one taking an oath to place his hand upon the Holy Bible—and for the same reason; because these were regarded by them as we regard the Bible now, as the most sacred of tangible things.

Reverence for the perfect man is not confined to the past, for at the present day one who is mutilated sexually is not considered a "man" and cannot be consecrated as a priest.

*Sex Worship—Howard.

Castration has always been regarded as a punishment worse than death—a fate that degraded man below the level of the lowest and meanest brute.

The Songs of Solomon are replete with the beauties of life as obtained by the gratification of sexual desire. They are full of the poetry of excessive delight over those things which go toward making the union between man and woman perfect. Especially is Chapter VII filled with the genuineness of true love, as exemplified in a perfectly mated pair.

The "Divine Act" is a natural one and should be regarded as such, and not classed among the hidden and unclean things of life. The false structure of prudery should be torn down and strong, clean views of life brought forward and a temple built to common sense.

CHAPTER II.

Unfortunately, in the past, no difference has been made between the terms Sexual and Sensual, and sexual matters have always been associated with the sensual and unclean. As has been said before, the Sexual Relation is the most sacred relation prevailing between man and woman united in holy wedlock. Sexual matters can only reach their climax when there exists that sublime emotion which is born when beings of opposite sex are in perfect accord with each other, and feel that there can be no happiness for them unless they become husband and wife. Love is the term applied to this feeling, and, without love, there is no chance for aught but the sensual to exist.

Women frequently submit to their husbands in the sexual embrace when their whole being revolts; yet, because of a desire to keep peace and avoid contention, they are willing to do almost anything. "Legalized rape" is not much higher in the moral scale than the criminal kind. A man who will use brute force or unkind words to obtain sexual gratification from his wife is no better than a brute. He should by kindness and love try to bring her to the point where he will not have to insist, but will have only to express a desire to have his wishes granted. No woman likes to be forced into the performance of an act that is repugnant to her, on account of the brutal

behavior of her spouse, any more than a man likes to be forced against his will to do that which he loathes.

That physical and psychical condition known as love has an element of spirituality in it which develops one's inner self to a state of perfection that would be unattainable without it. In other words, man and woman must first learn how to love before they can hope to reach the higher plane on which happiness is located and where the highest degree of marital felicity may be enjoyed.

The holiest aim in the life of any woman should be motherhood. No grander privilege was ever granted a being. To be able to reproduce her kind and watch and guide it as it develops mentally and physically is the greatest prerogative granted by nature. Nothing surpasses it. The nearest approach to the sight of the Deity one ever has is when he or she looks into the face of the mother of a new born babe. The mother's face is radiant with beauty and spirituality and fills one with awe and respect. Her countenance is one that artists never have been able to copy, because it approaches the ethereal and spiritual so closely as to be beyond them.

"There ain't a picture of it. If there was they'd have to paint

A picture of a woman mostly angel an' some saint.
An' make it still be human—an' they'd have to blend th' whole—

There ain't a picture of it, for no one can paint a soul.

No one can paint the glory comin' straight from paradise—

The motherhood that lingers in a happy woman's eyes."
—Wilbur D. Nesbit.

The woman who is blessed with the love of a good man, one who watches over her and cares for her gently and makes of her his ideal to be carried everywhere he goes, should be happy beyond the expression of words. During the dark days of pregnancy (and there are many of them), she needs the reassuring presence of her husband and his love. She wants to feel that he at all times is willing to be patient with her; she wants to know that her burdens are his, and that he is ever ready to do anything he can towards comforting her.

The great Nietzsche has given, perhaps, the

best definition of marriage that ever has been written: "Marriage; so named, the will of two to call into existence one, who is more than they who called him into existence." Where can there be found a nobler conception? To be able to bring into existence a being who, if brought up properly in a favoring environment, will amount to more than they who brought him into existence, should make all men and women pause and view with greater respect the institution of marriage and parenthood.

Marriage is the Rock of Gibraltar of our social structure. By its bonds it has more than once held nations together. Marriage is the promoter of happiness and bliss, the promoter of the greatest institution of all times—the home, and for these reasons alone will continue as an institution so long as the world shall last.

In order to properly preserve the race it is necessary that the sexual power be held in reserve and used only at the proper time; the proper time being after the law has united man and woman as husband and wife.

The wasting of sexual energy by illicit communion is likely to weaken man's procreative ability, and his chance to become the father of strong and healthy children. The organs of generation are given in order that men and women may become the fathers and mothers of beings like unto themselves. The procreative organs of the male and the female may be likened to great laboratories, wherein life is first originated; where materials are joined together for the purpose of making a new being. It is necessary that the materials gathered together in these laboratories be properly mixed, hence nature has provided the Fallopian Tube in the woman, where the spermatozoa or seed of the male and the ovum or egg of the female may meet and by incorporation become a part of one another. This contact results in a new body that begins to grow by cell division. This body remains for a little while in the Fallopian Tube, until nature, through the little hair-like processes which line the tube, forces the ovule out into the womb, where it grows more and more rapidly and finally develops into an embryonic being, which, after remaining in the uterus for 270 or 280 days, is born into the world a boy or a girl.

Marriage is not only an institution whereby two souls are united; it is the linking together for life of men and women for the procreation of children and the perpetuation of the race. It is the right of all races to be well-born. It is their right to be able to boast of the strength of their ancestry, and to come into the world strong in body and inherent capacity for mental development.

There often comes up, of course, the question of the advisability of certain men and women being allowed to procreate. There are many instances wherein parenthood is not advisable, as, for example, where it is known that there is a taint, on either the husband's or the wife's side, that would operate against the physical and mental welfare of their offspring, as would insanity, epilepsy, etc., in their line of ancestry, or where the husband is a weakling and the victim of drink, or some other pernicious habit or disease which saps his vitality. Syphilis, either acquired or hereditary, should at all times induce women to prevent conception. In brief, anything which inevitably tends to weaken her offspring makes it justifiable for the wife to prevent conception.

It has been suggested by some that in order to perfect the coming races it will be necessary to destroy the procreative ability of men and women who, because of degeneracy of one kind or another, either physical or mental, are rendered unfit to have children.

Havelock Ellis says:

"The most vital problem before our civilization today is the question of motherhood, the question of creating human beings best fitted for modern life."

When that time comes in our civilization, when men and women before they marry carefully investigate all that may be known of the lives of each, with the view of reaching a perfect union, then will be born as a result of that union the perfect man; then will the dreams of Eugenists come true, and a finer and truer philosophy of life be born.

There is no doubt that children born of happy parents—parents who really enjoy the marital relation—are the strongest, physically and mentally.

The act of begetting children is God-given and should be so regarded and respected.

Being a natural and socially necessary act, it should be performed with a view of obtaining the best results.

I have conversed upon this subject with a great many men and women, and have concluded that if husbands and wives would properly perform the marriage relation there would be an increased desire for children on the part of the wives.

Every day men and women marry who have not the slightest idea as to the proper manner of performing the conjugal act. They know that the result of their legal union is the consummation of this act, and instinctively find a method of performing it; but as to how to gain the best results from their sexual life they are grossly ignorant. They have been taught that to mention it is vulgar, and that only the low and sensually-minded ever discuss with others its performance. For this reason alone they are content to allow themselves to remain ignorant.

I venture the assertion that, if the true cause of the divorce evil could be ferreted out, it would be found that, in the majority of cases, the man and woman were sexually ill-mated. This would not be the case if the sexual relation were better understood by the married.

* * *

That Eugenics will, as popularly supposed, destroy love, because of its being a science, is not a fact. A greater love will develop from the mating of beings best fitted to perfect oncoming races, on which will depend the development of a higher civilization. Love has always stood for those things that are truest, and has done its part throughout all the ages that have passed in making perfect the union between man and woman in order that better men and women might exist in the future. Ideal love should be the very culmination of fitness for parenthood. It is practically impossible for a child to be well born who is the product of a loveless marriage. The results of loveless marriages—unhappy and mentally deficient children—are today everywhere present in society. I do not wish to be understood as meaning that all children born of loveless marriages are unhappy or mentally deficient. The environment which surrounds children may mean their making or their marring. Un-

doubtedly environment linked with hereditary tendencies has the effect of either retarding a child or sending it forward to a place among those who are born as the result of passionate love.

Havelock Ellis wisely says:

"It may indeed be pointed out that those who advocate a higher and more scientific conscience in matters of mating are by no means plotting against love, but rather against the influences that do violence to love; on the one hand, the reckless and thoughtless yielding to mere momentary desire, and, on the other hand, the still more fatal influences of wealth and position and worldly convenience which gives a fictitious value to persons who would never appear attractive partners in life were love and eugenic ideals left to go hand in hand. It is such unions, and not those inspired by the wholesome instincts of wholesome lovers, which lead, if not to the abstract 'deterioration of the race,' at all events in numberless cases to the abiding unhappiness of persons who chose a mate without realizing how that mate is likely to develop, nor what sort of children may probably be expected from the union. The eugenics ideal will have to struggle with the criminal and still more resolutely with the rich; it will have few serious quarrels with normal and well constituted lovers."

Our children, the dynamically sexless beings of today, will be the men and women of tomorrow, possessed of an ability to procreate the species. Shall we permit these children to grow up as nothing more than pieces of machinery and the slaves of tradition and superstition? Should they not be taught the mysteries of self, so that they may grow up with a higher sex purpose in mind, with a greater respect for those things which nature has decreed shall happen? I wish that it were possible for me to draw so vivid a picture of the fruits of ignorance, tradition, provincialism and superstition as to arouse society to intelligent action and force it from its present seat of complacency, and make its members vow to destroy the fruits of the iniquity of ignorance, for ignorance is the greatest iniquity of all, and is too apparent to be allowed to exist.

* * *

The time will come when, instead of two standards of morality, one for the man and one for the woman, there will be only one; and that one will be built on broad lines; built on charity and justice; built so that society will demand of both sexes the same degree of chastity which it now demands of woman alone.

What is most needed nowadays is plain talk, talk that will drive home facts about which there already has been much said and more written by speakers and authors who have feared to use plain language, and who have veiled their remarks so as to render their meaning very obscure; and who, for this reason, never have accomplished the results they have hoped for.

A discussion of the evils resulting from the illicit communion of man with the unfortunate creatures of the under-world is apropos at this point. Sooner or later, the patron of the prostitute contracts some loathsome disease—gonorrhea, syphilis, or chaneroid. Some writers claim that neither of the first two of these diseases is ever cured. This is a mistake, although the most rigid and prolonged treatment is always required.

There seems to be a sentence of silence imposed upon the young, their elders conspiring in concerted effort to conceal all knowledge. The young person is kept in ignorance of the dangers of venereal diseases. Even the medical profession, sad to relate, has not in the past paid the attention it should to the treatment and elimination of gonorrhea. The doctors have been inclined to make light of the disease and have told the patient that he could be cured without any trouble—instead of impressing him with the importance of proper and long continued treatment, and with the prospect of his future infection of the innocent unless he submitted to rigid medication.

Dr. Milton J. Rosenau, in his recent book, "Preventive Medicine and Hygiene," has the following to say regarding our present attitude toward venereal diseases:

"Our attitude toward the venereal diseases is very inconsistent. There is a natural aversion to these afflictions. The sanitarian should make no distinction between the venereal diseases and other epidemic diseases;

he should regard the greatpox in the same light that he regards the smallpox. The principles for the control of syphilis and gonorrhea differ in no wise from those used to control smallpox, leprosy, tuberculosis, measles, diphtheria, etc. The health officer must not regard venereal disease as a punishment for sin and crime—the victim or culprit needs help and sympathy. The immediate problem is the prevention of further spread of the infection. A person afflicted with a venereal disease should be treated in the same humane spirit that actuates the physician in other diseases. Furthermore, the interests of the community require that the patient be accorded the best possible care and attention. The usual attitude toward the venereal disease may well startle us when we consider that in most of our large cities no hospital will take a case of syphilis or gonorrhea during the acute stages, when these diseases are especially communicable. Morrow holds that the notoriously inadequate provision made for the reception and treatment of venereal patients is a disgrace to our civilization. Formerly lepers were segregated in vile lazarettos, and cases of smallpox isolated in horrible pest houses. Now we have comfortable and congenial isolation wards or special sanatoria for these diseases. From the standpoint of prevention, suitable hospital accommodations should be provided for the venereal diseases."

If the disease produced by illicit intercourse could be confined to the guilty, they alone would suffer; they alone would be compelled to bear the awful consequences of their debauchery. But unfortunately this is not the case; for these same infected men frequently marry good women, who are as chaste and pure as the driven snow, and impart to them the horrible infectious diseases contracted in the sowing of their "wild oats." Many a man has thus made an invalid of his wife, who, if she had married an untainted man, would have enjoyed the pleasures of good health and well-being.

But the wife is not the only sufferer. Her children are likely to be born blind, as the result of gonorrhea, or born with some loathsome marking or lesions of disease, or imperfect brain structure, so that they become idiotic as a consequence of syphilitic infection.

Syphilitic sequelae and nutritional disturbances may show in each child in succession, for its horrors last throughout many generations.

Dr. Charles W. Eliot, President Emeritus of Harvard University, has said:

"Chastity in man is just as necessary as chastity in woman, for the security, honor and happiness of family life; continence is absolutely healthful for both sexes; men's profligacy is the cause or source of women's prostitution, with its awful consequences to the guilty parties and to the innocent human beings who are later infected by the guilty; the most precious joys and most durable satisfactions of life are put at a fearful risk by sexual immorality."

Man should not expect more from the woman he loves and makes his bride than he is willing and ready to give in return. The days of the sowing of "wild oats" are passing. The time is approaching when a woman will look with scorn on a proposal of marriage from a profligate whose boast to his friends has been that he has had mistresses without number and has no desire to associate with a girl unless she allows liberties and is loose in her moral behavior.

Lydston, in his book "Sex Hygiene for the Male," pictures in vivid language what it means to harvest a crop of wild oats. I present the picture in its entirety, with the hope that it will aid in destroying the lie that all young men must have some experience in the sowing of wild oats before they can attain the title "man."

"Should youth be exposed to debauchery to strengthen it? Most emphatically, no! If youth were protected from wild oats influences until its judgment was mature, there would not be so many brands to be plucked from the burning. For the benefit of those who accept the 'wild oats' conception of the male ideal, here are a few pictures that are only too familiar:

"Picture 1. A certain health resort—the sinkhole into which a large part of the immorality, crime and diseases of America is dumped—there are a hundred thousand visitors annually. Of these, a large proportion go there to harvest their 'wild oats' crop. He who visits one of the government 'rale holes'

can best appreciate the harvest of the 'wild oats.'

"Picture 2. A hospital. Here is a group of locomotor ataxies; there a group of deformed children, yonder, a girl in her teens is nursing a child who never will know its father. More 'wild oats.'

"Picture 3. An asylum. Here is a case of general paresis; there a melancholiac; in the next room a maniac can be heard shrieking. 'Wild oats' a-plenty.

"Picture 4. A police court, full of drunks, criminals and bums. 'Wild oats' again.

"Picture 5. A jail. Here are 'wild oats' of the striped, short-haired variety in abundance.

"Picture 6. A foundling asylum full of children cursed by society before they were born as 'bastards.' Poor little 'wild oats.'

"Picture 7. A doctor's office full of anxious men and still more anxious women, who do not gossip much about their ailments, even among their intimates, save where the women are told by the doctor a pretty fairy tale for home use. 'Wild oats' growing in the dark.

"Picture 8. A brothel. Around the 'reception' room sits a collection of poor female creatures, many of whom were originally sacrificed in aiding youth to sow its 'wild oats.' These women are now getting poetic revenge, as the doctor knows.

"Picture 9. A beautiful girl is found dead in the river one fine morning. What is she doing there? Washing the 'wild oats' out of her life.

"Picture 10. A pistol shot rings out in a gambling hell—a man falls dead. The gun was loaded with 'wild oats.'

"Picture 11. A defaulting bank cashier flees to Canada; he is looking for a market for his 'wild oats.'

"Picture 12. A series of deserted babies are found in the snow. Who planted them there? Sowers of 'wild oats.'

"Picture 13. A wife, surrounded by her cold and hungry children, is sitting weeping—eating her heart out. The husband and father is on a drunk; he has whipped her, is in jail, or has deserted her. 'Wild oats' make broken hearts; they are poor food for babies; they do not buy coal, nor cover nakedness.

(Continued next month.)

THE JOURNAL

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EDITORIALS**TO SOME COUNTY SECRETARIES.**

Nearly every week the Journal receives complaints from members whose names have not been reported to the State Secretary as having paid 1915 dues. These complaints are to the effect that those who make them are not receiving the Journal and are in other ways deprived of the privileges of membership of the State Association. The complaints are just.

The mailing list of the Journal is made up from the membership roll and no names are entered on this roll without authority. When these complaints are received we write to the gentlemen and tell them the facts—that's all we can do.

There are four Secretaries of County Societies who have not paid their own dues for 1915. We hope these four are not as careless about the dues of others as they are about their own.

Please report promptly the names of all your members, including your own if you happen to be one of the four Secretaries.

THE DIFFUSION OF MEDICAL KNOWLEDGE.

It is only natural that the best medical talent—like the best talent of the legal, clerical and other professions—should be found in our cities. The facilities for clinical study, the benefits of a more extensive library, the inevitable sharpening of intellect that comes of frequent attendance upon scientific meetings upon personal contact, all make for the advantage of the city practitioner. But if any city physician feels that an advanced state of knowledge is his peculiar prerogative, he is either very conceited or does not come in contact with our country practitioners. Indeed there is a type of city doctor that can hardly meet

his rural brother without seeming to say that there lies a gulf between them—no matter how often they have met in consultation and no matter how often the latter has shown up to advantage. Apart from such laboratory and other examinations as cannot be easily made outside a city, our less favored practitioner does not often leave undone the measures that make for diagnosis—and even these he often makes or has made, though at considerable effort. It is gratifying, and by no means uncommon, to find these men wide awake to all the newer ideas of etiology and the newer means of diagnosis. It is refreshing to hear elderly doctors talk intelligently of the meaning of leucocytosis, hemoglobin index, blood pressure, etc., and the diffusion of interest in all advanced thought in Tennessee has been gratifying. The county and district medical societies are largely responsible for this advance, but these are of little avail if the individual lacks enterprise.

Wide-awakeness in doctors is nothing more than the public has a right to. Our profession must by the very nature of its duties have a conscience. And a conscience of any degree of vitality will not let its host idle his life away in the old paths, and, for instance, give quinine to a tuberculosis patient for months in ignorance of the cause of the fever.

These remarks are by way of approving the effort of a majority of country physicians to keep well abreast of medical thought—but are just as full of warning to the others that just "loll around," so to speak, and await the speedy-coming day when they will be back numbers. There are still too many of this class, and they are not all in the rural districts.

HOPEFUL SIGNS.

The old ideals are not altogether suspended, nor is the old spirit of medicine entirely dead. Some recent occurrences seem to indicate that commercialism and self-laudatory methods will not be allowed to triumph over better things without a fight from the men of the profession who do not believe that the dollar is all, even though mighty, and who do believe that he best serves humanity, his profession, and himself, who serves without the

blare of trumpet self-sounded and without the ink of self-seeking publicity.

We read in the Journal of the American Medical Association for July 17th a card from the Board of Management of the Polyclinic Hospital, New York, in which the board disclaims any responsibility in connection with the advertisement in the lay press of a certain method of treating inoperable cancer. The intimation is that the man or men responsible for the newspaper advertising campaign "used" the Polyclinic for selfish and unprofessional purposes.

We read in the report of the Judicial Council of the American Medical Association that the name of one fellow of the Association was dropped from the roll because he persisted in advertising in the public press. Also, that in another instance a fellow was adjudged guilty of publishing or allowing to be published matters which "violated the principles of medical ethics in that they were self-laudatory, defied the traditions and were contrary to the ideals of the medical profession."

So it seems that traditions and ideals are respected in some quarters even yet, and that the official voice of the greatest of all medical organizations is even yet raised in a demand that the traditions and ideals shall be preserved and lived up to by all who desire to stay within the pale.

New York and San Francisco are far off but are included in the territory of the American Medical Association, of which each state association is an integral part. No man in all the more than 70,000 men in the parent organization is bigger than the association. No man in it is too obscure to secure all protection which the great society can give, if he be worthy.

The bigger a man is, the more noted he becomes, the greater his obligation to conduct his life and his actions in harmony with the demands of true professional ideals which have been created by the worthy men who have made the history of medicine a glorious history. But, because a man has not gained position which gives him state-wide or nationwide recognition as a leader, is no reason why he, in his sphere, should not also do his humble part in maintaining the best traditions.

Men, big and little, have overstepped pro-

prieties in recent years without receiving just reprimand and have so been encouraged to repeat their transgressions. While some of these offenses were innocently committed, most of them were the direct result of a dollar-grabbing spirit, an intense egoism generated by success, or the desire of small men to push themselves into public notice.

It is hardly possible to remain in the company of a group of men, big or little, for as much as twenty minutes without hearing reference to the money-making capacity of men whose names may be mentioned. Scientific ability may be referred to, but the dollar has almost come to be the standard measure. And how many there are who make the personal pronoun the outstanding word of all conversation! And witness the number of the squirts, who, without ability and without conscience, have forced themselves into the center of the limelight if possible, or, failing there, persist in hanging themselves somewhere in the less glowing edge of the luminous circle!

The signs as we read them are hopeful. In a few instances warnings have been sounded which none but the fool can misinterpret. The money-grabber and the self-seeker are not going to be allowed to prostitute and debauch noble standards. Those who err innocently are going to be enlightened as to what their duty is. The old spirit is going to assert itself and American medicine is going to compel obedience to its rules of professional ethics or is going to denounce and disown those who will not obey.

ANOTHER COUNTY ORGANIZED.

The following letter announcing the organization of the Hardin County Medical Society has brought peculiar pleasure to the officers of the Tennessee State Medical Association:

"The Hardin County Medical Society was organized on Thursday, the fifth of August, 1915, with nine members, as follows: Drs. J. K. Barlow, W. E. McDougal, G. C. Morris, E. B. Walker, O. H. Williams, O. C. Doty, C. F. Gilbert, of Savannah, and Dr. R. L. Douglas, of Lutts. Dr. G. C. Morris was elected President; Dr. E. B. Walker, Vice President, and Dr. O. H. Williams, Secretary-Treasurer.

The Board of Censors was elected as follows: Dr. J. K. Barlow, three years; Dr. O. C. Doty, two years; Dr. C. F. Gilbert, one year. The Constitution and By-Laws, as suggested by the American Medical Association for County Societies, was read and adopted. The Society instructed the Secretary to send invitations to all the physicians of the county, urging them to join the Society. The regular meetings will take place the last Thursday in each month. There are twenty-six legally qualified physicians in Hardin County, and it is earnestly desired that before the year is out, every physician in the county will be a member of the County Medical Society.

OWEN H. WILLIAMS, Secretary."

Hardin County is strictly a rural county, not blessed with the most modern and convenient transportation facilities. Its people, however, are "alive and looking up," and its doctors are determined to avail themselves of every opportunity for equipping themselves for better service to those who depend upon them. It is not going to be easy for the physicians of Hardin county to attend regular monthly meetings of their Society, but we predict right now that the Hardin County Medical Society is going to be a success. The best men in the counties that are somewhat removed from the beaten paths of travel are everywhere exhibiting a spirit that could be followed to advantage by their brethren who are more fortunately located with respect to many modern advantages. They are showing a determination to overcome their handicaps, to assume more intimate and helpful relations with one another, to more adequately fit themselves for leadership in those matters in which doctors are entitled to leadership, and to advance themselves in their scientific relations.

A charter will be issued to the Hardin County Medical Society and a most cordial welcome extended its members, all of whom the Tennessee State Medical Association needs and wants.

INTRODUCING DR. L. S. TRUSLER.

Dr. L. S. Trusler is now at work in Tennessee in an effort to increase the membership of the State Association by securing new mem-

bers. Dr. Trusler is in the employ of the American Medical Association. As we see it, the interests of the Tennessee State Medical Association and those of the American Medical Association are identical. The Journal bespeaks for Dr. Trusler the cordial co-operation of all officers and members of the Association and its component Societies. We should have six hundred new names on our membership roll, to say nothing of old members who have carelessly deferred payment of 1915 dues.

News Notes and Comment

"That damn fellow has no right to operate—he's an internist," bawls Mr. B. Ripper Surgeon, as he lays his typhoid vaccine needle on the shelf alongside his salvarsan needle, to be cleaned by one of his several office attendants.

"These damn surgeons do everything," squawks Mr. C. Oil Internist, as he wipes his scalpel and forceps on an unsterilized towel before putting them in his bag with everything from a soiled wad of cotton to an obstetrical pad.

These be days of specialism, they be! The only real specialist we know is an old steer named "Judas," who leads the other steers to slaughter in a big packing house plant.

Five or ten dollars can widen a "specialist's" field of action, just like a forty-two centimeter gun can widen a breach in a four-inch brick wall.

What's the use of lyin'?

Dr. S. E. Gaines, of Sparta, spent two weeks of the month of August in Nashville.

Dr. S. S. Marchbanks, of Sparta, is taking a year's work in New York hospitals.

Dr. W. M. Johnson, of Bon Air, is at the Skin and Cancer Hospital, New York, for a year's work.

Dr. A. F. Richards, Secretary of White County Medical Society, sends the Journal news notes about the movements of his members. Like action by other county secretaries would be appreciated.

Forty cases of pellagra reported by the health officer of one rural county in July! It is probable that less than one-half of the cases are reported in any county—a condition of affairs that is not flattering to our doctors.

Dr. Scott Farmer, of Cookeville, spent his summer "vacation" at work in New York hospitals.

Dr. L. D. Hill, of Sparta, is now in the service of Bellevue Hospital in New York.

Dr. J. F. Bell, formerly of Arkansas, has located at Bon Air and has become a member of the White County Medical Society.

God help the poor when they fall into the hands of a doctor, specialist or not, who can't see around a silver dollar at a hundred yards!

White county has one of the best county medical societies to be found anywhere. There are seventeen doctors in the society, and at least five of them have been away for hospital work this year. That's the kind of material that makes a good medical society.

Men in high places sometimes perform in most reprehensible manner and then talk mighty loud about some poor little devil that tries their stunts on a small scale. And the rest of us stand for it!

Why not write now to some of the advertisers in the Journal for what you are going to buy? They will sell you the best to be had. Tell them you saw their ads in the Journal.

The "Indian Doctor" is still doing business at the same old stand. Indications are that he will suspend again before many moons. Have you sent in your contribution yet? The fight is still on.

Dr. W. O. Floyd, of Nashville, has returned to his work after visiting clinics in Chicago and Rochester and a trip to the California exposition.

We understand that a statement is being circulated in East Tennessee to the effect that the American Medical Association and Dr. Oscar Dowling are offering Wine of Cardui manufacturers large sums to compromise the suits brought against them. This statement, like most patent medicine statements, is untrue.

Suppose you had a young brother with an abscess in his ear. Suppose you took him to a specialist and asked him to stick a bistoury into the thing. Suppose he instructed your little brother to return to his office each morning for a few days for the simple treatment necessary. Suppose Dr. Specialist then sent you a bill for \$25. Suppose—we know what you suppose, and you are dead right.

A doctor works hard for twenty years and fits himself for consultation work. A patient is referred to him by a man in practice in the country who has not within his reach laboratory aids necessary for a thorough study of the case. The consultant is entitled to a \$25 fee, but needs a report on blood and urine findings, an X-ray examination, and a Wasserman. Five dollars for uranalysis, \$5 for ordinary blood tests, from \$15 to almost anything for an X-ray, and \$15 for the Wasserman! What's the answer?

Society Proceedings

MORGAN COUNTY.

Dr. W. E. Gallion, Secretary Morgan County Medical Society, writes the Journal that his society is going right ahead with its work in spite of the fact that it is a small society, and that roads are hard to travel. Six men comprise the membership of this county organization, leaving about an equal number of doctors in the county not affiliated. Regular quarterly meetings are held, the next of which will be at Oakdale on September 17. Regu-

lar programs are prepared and carried out, including papers on assigned subjects and reports of cases. Drs. Jones, Love and Gallion will read papers at the September meeting. The members of the Morgan County Society are showing the proper spirit, and we predict that the membership will increase and the good influence of the society spread in other ways.

CARROLL COUNTY.

Carroll County Medical Society met in Huntington, with the following members present: Drs. McGill, Martin, Dennison, Duncan, Dodds, Aydelott, Cox, Lancaster, Wright, Elinor, Trevathan, Cox, Hillsman, Williams.

These papers were read:

Typhoid Fever—Dr. Hillsman.

Malaria—Dr. Dodds.

Interesting discussions followed. In fact, a very fine meeting was held. The slogan for 1913 is, "Every doctor in the county a member."

Attention was called to the "Indian Doctor," and a contribution was taken, resulting in a collection of \$5, for that fund which has been forwarded to the state secretary.

At the conclusion of the meeting a picture was made of the members present.

We expect a splendid program and good attendance at the next meeting.

B. C. DODDS, Secretary.

ROBERTSON COUNTY MEDICAL SOCIETY.

The Robertson County Medical Society met in Springfield Tuesday, August 17, and was called to order at 11 a. m. by President Henry, with the following members present: Henry, Woodard, Moore, Banks, Frey, Johnson, Winters, Ramer, Fyke, Odom, Dye, with Dr. Caldwell, Nashville, visitor. Inasmuch as only one of the directors was present, some time was given to reporting and discussing clinical cases, and this feature of the program is growing to be very popular. Drs. Frey, Fyke, Woodard and Odom reported clinical cases.

Dr. Ramer read a paper on "Inflammation" that was discussed by Drs. Dye, Woodard, Fyke and Odom. Adjourned for dinner. The

society was entertained at dinner at the Springfield Hotel.

Reconvened at 1:30 p. m. The discussion of Dr. Ramer's paper was continued by Dr. Winters; closed by Dr. Ramer.

The next order of business was a report from the committee on arrangements for the doctors' picnic. Dr. Henry, chairman, made verbal report as follows: That a basket dinner be served and furnished by the members of the society; that every member be allowed to invite any friend he wished to be present; that as many of the families of the members attend as wished to attend. Inasmuch as no place had been definitely agreed upon, the committee asked for suggestions for a suitable place for meeting, when Dr. Moore suggested the campus of Peoples-Tucker Training School. After quite a discussion it was agreed to meet there if permission could be obtained. The committee was instructed to ascertain if the grounds could be secured for the day. It was furthermore announced that invitations had been extended to several physicians in Nashville to attend and read papers. It was announced that the program for the day would be "Cancer," and every paper read would be pertaining to some form of cancer.

By a special request, Dr. Caldwell read a paper on "Surgical Diseases of the Gall-bladder." A rising vote of thanks was given the Doctor for the paper.

The committee on arrangements is very glad to be able to report that Prof. Peoples very kindly granted the use of the campus for the society on the day of the picnic, September 21.

B. F. FYKE, Secretary-Treasurer.

GRUNDY COUNTY.

Wanted—A good, strong, second-handed medical society pulmotor for use in Grundy county. The patient is still breathing, but is in a bad way. The symptoms and disease are well known to all secretaries, also the etiology, but it wouldn't look good to describe even in a medical journal. The usual course of treatment has been pursued—tonics, moral suasion and a limited amount of cussing. At times the patient seems to rally just a little, but relapses; therefore without a change the appli-

cation of a medical society pulmotor may be imperative at any time. Address the secretary, Hy. Lockhart.

BEDFORD COUNTY.

The Bedford County Medical Society met in regular session Aug. 19, 1915. Both president and vice-president being absent, Dr. E. W. Patton called the meeting to order with the following members present: Drs. Orr, Avery, Spencer, Ray, Coble, Patton, Moody and Reagor. Minutes of previous meeting read and adopted. Committee appointed to look after Mr. Thomas, the "cancer paste man," asker for more time to report, which was granted. Dr. T. J. Coble read a paper on the subject of "Malaria," which was interestingly presented and elected a general discussion. It was unanimously agreed by the society that a minimum fee for typhoid vaccination should be at the uniform sum of \$5.00. No other business, society adjourned to next regular meeting, which will be September 16, when the subject of "Typhoid Fever" will be presented to the society by Dr. G. C. Haggard.

F. B. REAGOR, Sec'y.

ROANE COUNTY.

Roane County Medical Society met in regular monthly session in Harriman, August 16. President H. M. Carr presided, the following members being present: Drs. Sewell, Nelson, E. S. Phillips, W. S. Clack, T. H. Phillips, Rockwood; Carr, Givan, Hill, Harriman; Roberts, Zirkle, Kingston; Waller, Oliver Springs. Dr. W. H. McNutt was a visitor.

Dr. Roberts reported a case of tuberculous meningitis in a 1-year-old child. This babe had been brought from Chattanooga to see the negro quack at Kingston, and he diagnosed its trouble as "displaced stomach," although it had all the typical symptoms of meningitis. Its fond mother, after paying the negro \$20.00 for his superior diagnostic skill and a bottle of his "yerb medicine," and the babe rapidly growing worse, at last sent for Dr. Roberts just before it died. (May the Lord deliver us from such humbuggery, our courts will not.)

Several other clinical cases were reported and interestly discussed.

Dr. John Roberts read a very interesting and able paper on "Normal Labor." This paper was discussed and complimented by most all present.

A committee was appointed to get up a uniform fee bill for the Roane county physicians and report at the next meeting. This committee consists of Drs. G. C. Givan, chairman; J. E. Nelson, John Roberts and J. J. Waller.

Society adjourned to meet at Rockwood third Monday in September.

W. W. HILL, Sec'y.

GILES COUNTY.

The following report of the Giles County Medical Society was taken from the Pulaski "Citizen," in which it was properly published.

The Giles County Medical Society held its monthly session on July 23.

The committee appointed at the last meeting on "The House Fly As a Carrier of Disease" made a report and furnished literature showing how this insect, by feeding upon infected matter, carried the germs of disease to human beings on his feet and body. A number of these circulars and posters were given out to be distributed by the physicians.

Dr. W. D. Abernathy reported a case of pellagra and invited the members present to visit the patient. A death from pellagra in Pulaski was reported by Dr. C. A. Abernathy.

A general discussion on pellagra was then had by the members. The profession has not definitely determined the real cause of this disease, which is increasing in an alarming degree. A controversy is being waged by those who think the disease is contagious and produced by a specific micro-organism, and others who contend that the disease is due to an improper diet, or the absence of certain elements of food, and not communicable. In this connection it is not improper to mention the fact that our County Court at its last session made an appropriation of \$50.00 to pay for an advertised pellagra "cure" for a victim of this disease. The society was somewhat caustic in its remarks at this supposed generosity of the custodians of the finances of our county, especially as this appropriation

was not sanctioned by the health officer or any medical authority.

While the best brain and intelligence of the medical profession are devoting their might and main in studying the real cause, nature, and cure of this increasing malady, our court listened to the vamping of a promoter of a "guaranteed cure" for the disease and bought the remedy. The act was generous, but an unwise and profligate expenditure of the people's money, and will no doubt be put into an advertisement to further the sale of this "guaranteed cure," to dupe others into the purchase of it which is perhaps worse than worthless.

Dr. Grimes then read his paper on "The House Fly As a Carrier of Disease." The paper discussed the various ways in which the fly is generated and the millions that one female fly may hatch out in one season. It is claimed by entomologists that the number may reach the thirteenth figure, or above the millions. The paper brought out the methods by which the fly feeding on filth contaminated with disease germs carried the germs on his feet to food and drink of the human family, who unwarily took these disease producers into their bodies and were infected in that way.

The members discussed the paper at length and agreed that the house fly should be annihilated. The method of his destruction should be the fly trap, stick paper, and the swat, and better still, the abatement of his breeding place and the destruction of the fly eggs. The breeding place of the fly is stable manure, and the eggs can be killed by an application of borax, which destroys them and prevents the hatching. In this discussion sanitary closets were recommended and incineration of cremation of fecal matter, and garbage was urged and the pollution of our streams by sewers condemned.

Dr. J. A. LaRue will read the next paper and the subject will be the duty of the public to these sanitary measures in the prevention of disease. The subject was suggested by the fact that the public was invited to attend this next meeting as it is deemed *pro bono publico*.

C. A. ABERNATHY, Sec'y.

WHITE COUNTY.

The regular monthly meeting of the White County Medical Society was held at Sparta on Thursday, August 12. A goodly number were in attendance. A splendid paper on "Arterio-Sclerosis" was presented by Dr. P. K. Lewis, and the discussion by the members present was liberal and profitable.

By unanimous vote the time of meeting was changed from 12:30 to 10 a. m. on every second Thursday in each month. This change will add to the profit of the meetings by allowing more time for the work of the society.

A. F. RICHARDS, Sec'y.

DAVIDSON COUNTY.

May 25th.—The President, Dr. W. E. Hibbett, called the regular weekly meeting of the Academy to order at 8:20 p. m. The following members were among those present: J. A. Witherspoon, Oughterson, Goodwin, D. Eve, Sr., Gaines, Cowden, Plunkett, C. C. Sullivan, Floyd, L. Caldwell, T. A. Leonard, Bloomstein, Harris, McKinney, Orr, B. Caldwell, Schell, J. Witherspoon, Jones, Witt, O. Bryan, Bromberg, Grizzard, D. Eve, Jr., Williamson, McIlvain, Pickens, H. King, Fuqua, Keller, Kennon, W. B. Anderson, Aycock, Harrington, Pollard and Tigert.

Dr. J. A. Witherspoon made a report of the work of the Committee on Publicity of the Typhoid Situation in Nashville.

Dr. J. A. Witherspoon moved that an expression of thanks be extended the press for printing the articles on typhoid. Seconded and carried.

Dr. J. A. Witherspoon addressed the Academy on the "Etiology and Treatment of Gastric and Duodenal Ulcer."

In the absence of Dr. J. O. Manier, who was to open the discussion, Dr. W. H. Witt opened, saying in part that he felt very uncertain on the question of peptic ulcer. He was not prepared to offer views on the cause of ulcer of the stomach and duodenum, but hoped for something great from Rosenow's work in regard to this. The speaker said that one of his greatest difficulties is in satisfying himself of the presence of ulcer. In regard to vomiting blood, he said that he had never seen over one or two cases of ulcer that pre-

sented that symptom; the cases of hematemesis he sees are due to cancer or cirrhosis of the liver, or as a result of wrenching and vomiting in ulcer. Dr. Witt does not lay much stress on the "hunger pain" of Monahan, and stated that he is rarely able to make a diagnosis of ulcer unless the case is long drawn out. He said that he had seen a number of cases previously diagnosed ulcer, but the patients were pure neurotics. As to the treatment he believes very strong in that as outlined by Dr. Witherspoon. He does not advise operative procedures unless there is pyloric obstruction. However, old cases suffering constant pain should be given the benefit of surgery. Excision of the ulcer, he said, was ideal, but this procedure has a high mortality.

Dr. Gaines said that his ideas of treatment have never been crystallized and hesitates to talk on a subject on which he has not clear-cut ideas.

Dr. Witherspoon (closing) said that he worked with Sippey two years ago; and the results observed with him, and in his own work, were remarkable. Referring to the symptom of "hunger pain," Dr. Witherspoon said that there is no single symptom that is diagnostic. He spoke further on the question of diagnosis.

Case reports were called for. Dr. Witt reported a woman 35 years old with a previous history of being a neurotic. Ten months ago she was under a rather severe strain. She resumed her occupation in October last. About the first of March, while in a meeting of some sort, she had a desire to urinate. This was not convenient when the desire first came, and when attempted later she found it impossible to void. She was catheterized; and this was continued at intervals for some time. At this time the vaginal and urinary examinations were negative. She began to vomit and refused food, losing weight and strength. During this time she spent some time in two infirmaries in this neighborhood. On her return to the city an examination by her regular physician revealed a movable left kidney. She was told of this and her urinary condition improved, as did her general condition, though the latter only temporarily.

When Dr. Witt saw her she had burning and soreness in the abdomen in the region of the cardiac end of the stomach. The mucous membrane of the mouth and tongue, as well as the vulva and rectum were very red. There were diarrhoea and vomiting. There was hysterical anaesthesia from the hips down. Her mental condition became gradually worse and she died. Dr. Witt asked if this was pellagra.

Dr. J. A. Witherspoon said that the natural conclusion was to agree with Dr. Witt. In regard to the eruption, he said that it was unusual for the eruption to appear except in the summer time.

Dr. Hibbett concurred in the diagnosis of Dr. Witt.

Dr. Hibbett exhibited a chart which demonstrated the existence of fourteen cases of typhoid fever in Nashville directly attributable to one spring in East Nashville. The chart was explained further by Dr. Jones.

Adjournment was taken at 10 p. m.

June 1st.—The Vice-President, Dr. H. M. Tigert, called the Academy to order at 8:15 p. m. Among those present were: Cowden, Roberts, Tigert, Gaines, H. Wood, Tarpley, R. Barr, Fuqua, Shoulders, Williamson, Polard, D. Eve, Jr., Witt, C. F. Anderson, Orr, Oughterson, I. Caldwell, Weaver, Harrington, Crawford, Floyd, Bloomstein, Kennon, Sayers, Handley, Morrissey, Leonard, Friedman, Sharp, Manier, H. King, Pickens, Hill, Nichol, Schell, Cayce, Billington, DeWitt, L. Smith, Haskell, Sanders and McCabe.

The essay of the evening was "Anoci-Association," by Dr. C. N. Cowden.

Dr. J. A. Gaines opened the discussion, saying that he was enthusiastic on this subject, having used anoci-association exclusively for two years. During this time he has used it in several hundred cases representing all types of surgery except brain surgery. His results have been eminently satisfactory. He said that anoci-association is not adapted to any case that cannot be given a satisfactory dose of morphine, nor is it applicable to young children, though he has used it in a child of 8 years. The speaker stated that the

results will not prove satisfactory unless the entire technic is carried out.

Dr. R. A. Barr said that there are certain drawbacks to anoci-association that are evident on the face of it and that it is futile to attempt to carry out the technic as described by the essayist. As impossible as the details of the technic is the getting a patient who would go through maneuvers described without knowing what the operator is going to do. Crile and his followers, he said, are fooling themselves instead of the patient. Dr. Barr said that he has not attempted the full technic of anoci-association, but has tried to combine local anaesthesia with general anaesthesia. If, as is contended by the advocates of anoci-association, all that general anaesthesia does is to cause a loss of consciousness, why use general anaesthesia at all, he asked; why not do all operations under local anaesthesia if it is possible to completely block all pain sensation? The speaker said that by good fortune and a good patient he was able recently to do an appendectomy under local anaesthesia, but thinks the question of gallbladder surgery out of the question under local anaesthesia or anoci-association.

Dr. DeWitt said that he did not agree with Dr. Barr, due perhaps to an early prejudice for local anaesthesia. He thinks the good effect of anoci-association due largely to the morphine and scopolamine, which lessens the amount of general anaesthetic used. He said local anaesthesia on the mesentery will not lessen the effect of tugging on that structure, since the nerve filaments affected are distal to the point so anaesthetized.

Dr. Gaines said that any traction in the abdominal cavity will raise the pulse rate in the reflex arc intact. He said he often injected novocain in the mesentery.

Dr. Cowden (closing), discussing the effect of trauma, fear and fright on the brain as described by Crile. He said also that in his work he does not get sufficient relaxation under nitrous oxide anaesthesia when used alone, and he is informed that a large percentage of the cases at Cleveland some ether is given.

Under the head of case reports, Dr. Howard King presented a patient with an unusual type of tinea sycosis.

Dr. Friedman said that this fungoid type of barber's itch was rare, and that it is often mistaken for blastomycosis or other mycoses.

Dr. Cowden arose and said that there was a man in Nashville who claimed to be a doctor and who is treating cancer by some hypodermic injection. He wanted to know what the alleged doctor was probably using.

Dr. Friedman said that he was probably using protoneuclin, as this is being used by a number with results that are said to be good.

Dr. N. C. Leonard described an arsenical method of treating malignant growths.

Dr. Pollard discussed the methods of this alleged quack referred to by Dr. Cowden and asked what could be done with the impostor.

Dr. Gallagher asked what is the difference between the Nashville quack and Dr. Beebe of New York, who in a recent article in the New York Sunday Times claims to cure inoperable cancer with serums; also, Dr. Bulkley of New York, who claims to cure cancer with a diet. There being no further business the Academy adjourned at 9:30.

Correspondence

Secretary Journal, Tennessee State Medical Association, Nashville, Tenn:

A review of the recent literature on the Abderhalden test makes it apparent that the Abderhalden test is no longer considered of the diagnostic value accorded to it by the earlier writers. Therefore, the National Pathological Laboratory discontinued advertising or charging for the test for over one year. That there is some information to be gained from a properly performed test is made clear from an article by Falls in the American Medical Association Journal, June 5, 1915, pages 1898 to 1900, entitled "The Present Status of the Abderhalden Test." During the past year the National Pathological Laboratory has been doing the test for physicians on request, but has always informed them that it was done experimentally and has called attention to its limitations in each case.

Respectfully yours,

NATIONAL PATHOLOGICAL LABORATORY.

Book Reviews

THE MEDICAL CLINICS OF CHICAGO. Volume I, No. I. Published bi-monthly by W. B. Saunders Company, Philadelphia, July, 1915.

This is a new publication of a sort that seems to have become very popular, differing from other works of its kind, however, in that it is devoted entirely to internal medicine—including neurology, pediatrics, X-ray therapy, etc. The first volume contains "Clinics" by Drs. Mix, Williamson, Abt, Preble, Goodkind, Till, Hamburger, and Hamill, all teachers of recognized ability. The subjects discussed are varied and the clinics have been chosen with fine judgment as to what will interest those who will subscribe to a publication of this kind. The tremendous circulation of the best of the "clinics" is positive proof that the profession considers them worth while and as yielding benefits not to be had elsewhere. The character of the men who are to contribute and the great abundance of clinical material from which they will select their clinics makes it certain that "The Medical Clinics of Chicago" will be a success.

THE CLINICS OF JOHN B. MURPHY, M.D., Mercy Hospital. June, 1915. W. B. Saunders Co., Philadelphia. \$8.00 per year.

Fractures and dislocations of bones of the hand and forearm are treated of in a most instructive manner in the first forty pages of the current number of Murphy's Clinics. In a "Talk on Appendicitis," Murphy points out the fact that the average hospital mortality rate is just a little over ten per cent, and insists that the time is not yet to stop talking about appendicitis, but that just now is the time to begin talking about it. He makes the time for operation the time of diagnosis, and says that "the disappearance of pain is the last call to operation." Dr. Murphy also emphasizes the importance of keeping in mind the fact that the mortality rate in appendicitis in children is three or four times as high as in adults.

"Intestinal Obstruction, Due to a Large Gall Stone," "Embryonic Tumor of Testicle," "Congenital Perineal Fecal Fistula," "Hypernephroma of Right Kidney," are some of the subjects of clinics, while a "talk" by W. J. Mayo on "Unsuccessful Gastro-enterostomy" is also included in this volume.

ALVEODONTAL PYORRHEA. By C. C. Bass, M.D., Professor of Experimental Medicine, and Foster M. Johns, M.D., Instructor in Laboratories of Clinical Medicine, at Tulane. Illustrated. W. B. Saunders Co., Philadelphia, 1915. Cloth \$2.50.

The work of Bass and Johns stands out in the recent history of medical progress. None of their joint investigations have reflected more credit upon them, perhaps, than that made by them to discover the positive etiological factor in pyorrhea. They prefer to discard the old term, "pyorrhea alveolaris," and have invented the term "alveodental pyor-

rhea" to designate the disease, giving very satisfactory reasons for their preference. Their research has convinced them that the specific cause of the condition is endamoebal, of the species *buccalis*, but do not claim that they have been able to satisfy Koch's postulates. They point out, however, that this has not been done with other disease due to protozoa.

The discussion of all the phases of Rigg's disease is full and convincing. While there are many who are not disposed to accept the hopeful view assumed by Bass and Johns as to the curative treatment of the disease, there can be no doubt but that their conclusions as to the etiology will be generally and finally accepted as correct.

A strong chapter on prophylaxis is a feature of the book. It is to be hoped that this latest work of these two very active Southern investigators will be widely read and that their teachings will lead to a marked diminution in the prevalence of this very serious disease.

FRACTURES AND DISLOCATIONS, DIAGNOSIS AND TREATMENT. By Miller E. Preston, M.D., M. R. C., U. S. A., Instructor in Anatomy, University of Denver, etc. C. V. Mosby Co., St. Louis, 1915. Cloth, \$6.50.

This is a well illustrated book, well arranged, and well written. Many of the illustrations are from photographs and plates made very shortly after injuries were received and are particularly clear and instructive. Fractures and dislocations of any anatomical region are considered together and this arrangement of the subject matter has an undoubted advantage. While the whole work is concise in statement, essentials are not sacrificed; on the other hand, all that is necessary for practical purposes is given of surgical anatomy, pathology, symptomatology, diagnosis, and treatment. Albre's work on bone-grafts is described in detail, this being a very valuable feature of the book. A chapter on "The Use of the X-ray" was contributed by Dr. H. G. Stover, who was known as one of the foremost workers in this department of scientific medicine. From the mechanical standpoint, also, this is a fine volume, substantially bound, clearly printed and convenient in size.

CANCER. By Howard Canning Taylor, M.D., Professor of Clinical Gynecology in Columbia University, Gynecologist, Roosevelt Hospital, etc. Lea & Febiger, Philadelphia, 1915.

Dr. Taylor undertakes the task of putting together the facts known, or thought to be known, about cancer. His book is a success and deserves to be widely read. Nowhere else than in this book has the writer of this note seen the sum of modern information about cancer so attractively and instructively presented. There is no "lost motion" anywhere in this work—every word has a purpose and accomplishes its end. When the book is opened one reads to the end, and when the end is reached one is satisfied that he has reviewed the whole subject of cancer.

OPERATIVE GYNECOLOGY. By H. S. Crossen, M.D., Associate in Gynecology, Washington University Medical School. Illustrated with 770 original illustrations. C. V. Mosby Co., St. Louis, 1915. \$7.50.

This volume of more than 650 pages, profusely and splendidly illustrated, is devoted entirely to operative treatment. With the superabundance of operative procedures which have been devised by a host of surgeons, each trying to perfect his own chosen method for dealing with each separate pelvic pathologic entity, it is not to be supposed that all will agree with even so able a man as Crossen in his choice of operations. The very numerous methods of dealing with each condition demanding operative interference must be reduced, however, and the best of them must be standardized. One man cannot do this, but Crossen has made a fine start in that direction in his latest work on "Operative Gynecology." Dr. Crossen does not advocate the exclusive employment of any one operative procedure in every case of any particular lesion; on the other hand, he clearly points out that this cannot wisely be done. There can be utilized one of a comparative few of the many operations devised, however, and the author of this splendid volume describes these very fully, distinctly bringing forward indications and contraindications in a way that will enable his readers and students to make a wise choice.

THE PREVENTION AND TREATMENT OF INFECTIONS. By Oliver T. Osborne, M.D., Professor of Therapeutics in Yale Medical School. Journal of the American Medical Association, Chicago, 1915.

We easily become smugly satisfied with our knowledge about fundamental things. We feel quite certain that we have a thorough understanding about "simple matters." Hence we need to read carefully, at least once in a while, just such books as this by Dr. Osborne, so that we may be brought to a realization of the more or less painful fact that we never did know a lot of things we thought we knew, and that we have forgotten much that we did know for a time. There is not a doctor anywhere who could read this little book without great profit. It is a compilation of the series of articles, entitled "Prevention Greater Than Cure," which appeared in the Journal of the American Medical Association. This book can be had for a very modest sum.

CHEMISTRY AND CHEMICAL URINALASYS FOR NURSES. By H. L. Amoss, M.D., etc., U. S. Bureau of Chemistry, Assistant in Preventive Medicine, Harvard Medical School. Lea & Febiger, Philadelphia, 1915.

This is a volume of the Nurses' Text Book Series and is intended for the use of nurses. Consequently the subject matter is presented in the simplest possible language, and the arrangement is such as best comports with the purposes of the work. It is doubtful whether a text-book on chemistry will be of much worth to a nurse who has not studied chemistry to some extent at school. It would be hard, however, to present material facts in any simpler manner, to be at the same time impressive, than has been done in this book.

PRACTICAL MATERIA MEDICA AND PRESCRIPTION WRITING. By Oscar W. Bethea, Ph.G., F.R.S., Assistant Professor of Materia Medica in Tulane University. F. A. Davis Company, Philadelphia, 1915. Cloth, \$4.00.

The dominant idea in the mind of the author in the construction of this book seems to have been that only a few drugs are worth giving and that only a few are given by doctors in their daily practice. As a consequence, Dr. Bethea fails to give any notice to many valuable agents which are used to no small extent. We really are unable to discover any need for that part of his book dealing with materia medica. The second part, on Prescription Writing, is better, but could have been put out to better advantage at far less cost by leaving out most of the hand written prescriptions, each of which takes a page. We fail to find anything in the book that makes it anything of a necessity to the doctor.

A TEXT-BOOK OF SURGERY. Third Edition, rewritten and enlarged. By George Emerson Bower, M.D., Professor of Surgery in College of Physicians and Surgeons, Columbia University, etc. Lea & Febiger, Philadelphia, 1915.

This is the third edition of a very popular work. So much has been added that is new and so much general improvement made over former editions that this is virtually an entirely new book. It is a very complete reference work, covering the whole subject of surgery in as thorough manner as is possible in a volume of this nature.



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THE HEART IN SOME ACUTE INFECTIOUS DISEASES*

By W. H. Witt, M.D.
Nashville, Tenn.

The role of the heart in the acute infections is recognized by all of us to be an important one and in a sense we are constantly bearing this importance in mind, but I dare say that we are liable to neglect a proper differentiation of cardiac problems that may arise in the various infections. We are apt, for instance, to overlook the fact that the heart problem in typhoid is different from that of pneumonia, and that of diphtheria different from that of either of the two mentioned. I have thought it might not be a waste of time to review the fundamental facts of several infections in their bearing on the heart, and out of this review probably call attention to rational modes of avoiding a failing heart or of treating it when encountered.

The acute infections in which we are more or less liable to be confronted with a failing heart are pneumonia, typhoid fever, diphtheria, influenza and rheumatic fever. Other infections that may reach a stage of gravity on account of heart failure do so rather by virtue of a pathology that extends beyond our usual concept of those diseases—in other words, they become grave more by virtue of complications than by their own usual course. In this list I would include measles, whooping cough, smallpox and probably scarlet fever.

Several of these at least, if they become severe, do so by the development of a broncho-pneumonia, a condition that brings new burdens and dangers to the heart. The first four infections (typhoid, pneumonia, influenza and diphtheria), too, have a somewhat different way of involving the heart than that had by rheumatic fever. Typhoid fever, probably by virtue of its toxines, gradually attacks the heart muscle—rarely is there an infectious endo- or peri-carditis. The heart muscle undergoes degenerative changes not unlike the changes undergone in other muscles of the body. It takes a virulent type of the disease or a prolonged course to affect the heart to disadvantage. Cardiac failure may gradually supervene and with hypostatic pneumonia the patient goes out by what we call heart failure. I am disposed to think that few cases die in this way, but that nearly all deaths in typhoid are due to complications, such as hemorrhage, perforation, pneumonia and others.

In pneumonia the cardiac attack is very different. Here in a much more real sense than in typhoid, circulatory failure is the cause of death. The fatal issue arises from two features of the disease—(1) the intense toxemia attacking the vaso-motor mechanism, and (2) the peculiar mechanical strain put upon the right heart. In diphtheria and influenza the toxic effect of the disease upon the vaso-motor system is in many cases very severe, so that with great rapidity the heart fails not unlike it does in pneumonia and may fail very rapidly or with great suddenness. As a sequel of diphtheria a neuritis may ensue that produces rapid heart failure. Probably in influenza the greater danger to the heart lies in

*Read at meeting Tennessee State Medical Association, Nashville, April, 1915.

the pneumonia that is more or less a mixed infection, but there are certainly cases—especially in the aged—that rapidly overwhelm the heart without the presence of any pneumonia, and others in which the heart involvement is not immediately severe but it persists. In rheumatic fever the heart exhibits a real infectious process—a true carditis—with or without an endo- or peri-carditis. In the other diseases mentioned we do not recognize an actual infectious process in the heart muscle. Contrary to what one might expect there is much less danger of a fatality in a rheumatic fever patient with an infectious carditis than in those diseases showing toxic effects only or chiefly upon the circulatory structures.

Recognizing then certain fundamental differences in the modes of endangering the heart, we may take up the question of safeguarding that organ in the various infectious diseases. I shall first refer to typhoid fever, not because the matter is so important in this infection as because there is still too much effort—mostly not needed—to sustain the heart with stimulants. Making reference to practitioners as a whole, I think that certain errors are still more or less prevalent in the treatment of typhoid fever, all of which have a bearing on the condition of the heart. These errors are too little water, too little nourishment and too much medicine. I have no wish to precipitate a discussion on how to feed typhoid patients, am not myself an advocate of high caloric feeding, yet I do feel that many of our cases are underfed and are getting too much panopepton, liquid peptonoids, broths and other food of little nutrient value. As food maintains some degree of flesh and strength, it saves the heart and tends to prevent cardiac starvation. Too little water is, I am sure, a common error. A hundred or more ounces of liquid should be the daily intake and more is better. Water acts as diluent and eliminant for the poisons. The external use of cold water is practically as helpful as its liberal internal use and has even a more direct beneficial effect upon the circulation. I fully realize the difficulties that so often obtain in getting patients to take either food or water in sufficient amount. But perseverance will do a great deal. It will rarely do to direct

that a patient be given water freely; the amount should be specified and the quantity taken charted. So also should the amount of urine passed.

I have referred to the too free use of medicines as an error that still exists. In this I do not mean coal tar febrifuges—I take it that they are rarely employed—but rather the use of other not needed drugs that in themselves may do no harm but they serve to call our attention away from the more necessary items of food and water. The patient that has some kind of medicine to swallow every two hours will not fancy being disturbed at other hours for water or food. The great majority of typhoids may be carried through with half dozen doses of medicine and this leaves the nurse to earn her money by giving water and baths. The preceding suggestions will carry typhoids along so well that in only a few cases need stimulants be thought of. Yet there are still many practitioners that think that whiskey and strychnia are needed as a routine in typhoid. Probably not one case in ten presents a real need for artificial support. With the probable exception of pneumonia, the usual complications of typhoid like hemorrhage and perforation afford no demand for stimulants. Sudden depressions of circulation such as may come from unknown cause, or from distended bladder, use of enema, etc., demand a diffusible stimulant such as aromatic spirits or whiskey. If in spite of all efforts and in the absence of any complications the heart becomes progressively weaker I believe in using whiskey or strychnia, but am not sure I have seen any great benefit by their use. Such cases usually die. As intimated before, I do not believe such cases are common. The great factor in managing the heart in typhoid, then, is prevention. Avoid the need by food, water, bathing and mental quiet.

The heart problem in pneumonia, unlike typhoid, is not underestimated in the practice of our art. We know that if the circulatory system is able to stand the toxic and mechanical attack of pneumonia for but a few days the battle is won by the defense. I fear, though, that we have over-rated the importance of the mechanical strain put on the right heart by the consolidated lung. That this is at times a

very real danger I do not deny, but if we go over our cases in review I think we can recall only a few in which dilatation of the right ventricle was very well marked—or if so, probably as a terminal event. Consequently I hold that very few cases have any hope of benefit by the striking therapeutic measure of bleeding. I can recall only one case in which death seemed to ensue by progressive involvement of lung until a minimum of breathing space was left. I do not mean to say, however, that only such extensive involvement will be attended with right ventricular dilatation. But it is the left ventricle and the vaso motor system that bear the brunt of the attack in the great majority of cases of pneumonia. We speak of toxins in the blood, depressor effects on the centres, hemolysis, etc., but we do not know much except the results. We know that after a varying period—often very brief—the blood pressure falls, there is an occasional skip or a weak beat and the experienced physician can predict the end. McKenzie says that when the pulse begins to vary in its strength or drop a beat, a fatal issue may be predicted if these changes occur well before an expected crisis. Gibson taught that a blood pressure as expressed in millimetres falling below the pulse expressed in number of beats suggests a fatality. I am sure neither one of these dicta will always hold good, but if combined with poor general appearance their meaning is only too certain. There is no disease showing greater variation in its toxic features than pneumonia. I have recently had a man of thirty-five with double pneumonia whose pulse was only a few times above ninety—usually eighty-four, and respirations eighteen to twenty-two. The next case might well be so toxic that as early as the fourth day I could predict a death. I have had several women—no men I believe—of seventy or thereabouts stand lobar pneumonia as well as a child. It is not our medicines in these cases—it is only the light toxemia that makes the fortunate issue. The aged with their vascular deficiencies, their nephritic and other possessions would have otherwise little chance to survive.

As to treatment: I approve in the proper case of bleeding, but only if we feel that relief of the right ventricle gives great hope of help.

If it is the vaso-motor system that is attacked as seen in the blood pressure, rate of pulse and relaxed skin, our therapeutics should be different, but what we should do I cannot tell. Apart from tonic effect that I have seen in some cases by cold sponging I am not certain I have been sure of doing any immediate good by my drugs or other measures. I have no intention of debating the merits of whiskey, caffeine, camphor, adrenalin or other much used cardiac stimulants. Sufficient to say that all have their advocates and their “knockers” and that the general death rate from pneumonia goes steadily along varying from say 10 per cent in private practice to 30 per cent in hospital practice. If I am asked what to do for a pneumonia patient that may be of real help I should say fresh air, cold sponging—especially if high fever—good deal of water, keep down abdominal distention, very light feeding, mental and physical quiet, carefully used morphia for excessive coughing, pain or sleeplessness. All these things I conceive are of real value in maintaining vaso motor tone, but they are not in themselves classed as cardiac tonics. They only constitute general measures that are safe and that may help win the day. As in typhoid a sudden cardiac failure may get relief by ammonia, whiskey or probably strychnia, but when we expect them to save a steadily failing circulation I think we may as often do harm as good. I am a strong believer in the tonic effect of cold sponging in pneumonia. Probably the temperature ought not to influence the use but it has to some extent with me. A moderate or high temperature with toxic manifestations has been my guide. Both mental and vaso-motor features proper will respond to the cold water.

In influenza the care of the heart comes in for very definite consideration. The majority of cases in which this problem comes up will be either those cases that develop a pneumonia more or less extensive or those less understood cases mostly in advanced years that recover from the acute attack but are left with more or less crippled circulatory organs for weeks or even for indefinite period. There is only a limited number of cases that develop a genuine endocarditis. The pneumonia cases are to be managed very much as a pneumococcus attack

after the case is developed. I would warn against too much anodyne and probably depressant treatment in the early days—when the demand for these is strong and the pneumonic features are not developing. I would also suggest that there is small field in these cases for morphine. Influenzal pneumonia in middle aged or elderly people is a very fatal disease and I have not much confidence in therapy. Those more insidious heart cases that follow or attend influenza are of great importance, as a little bad management may result in an early breakdown, and proper care may save a life or prevent semi-invalidism. Our chief effort is along lines of prevention of overstrain. And here comes an advantage of climate in that the proper climate facilitates recovery from the bronchitis and cough that strain the heart. Besides, in the grippe season, usually late winter, moderate exercise out of doors is good for the hearts of most of these patients. Fatigue is not to be tolerated. Open bowels, active skin, graduated exercise and time will restore many of this type of cases, but some never recover their circulatory power. It is a fortunate thing that the after-effects of influenza are well known to the public, for whether the residual weakness be broncho-pulmonary or cardiac, or mental, we can reason with patients for a careful mode of life and a patient waiting for the day of complete restoration. I rather think that our recent epidemic of grippe was nearer like the earlier waves than any I have seen for some years. Pneumonia was not so prevalent, but there were many cases associated with rather profound prostration—some of these in children.

Only a brief word about the heart in diphtheria. During the attack there may be a gradual or sudden failure of the circulation, even to fatality. Whether the trouble is chiefly with the heart muscle or the nervous mechanism it matters not, there is little to that we can do. Pathologists describe for us every variety of degenerative process in the heart muscle in this disease. When a serious state arises, probably posture—in other words, the scrupulous avoidance of sudden strain is our best card. Absolute recumbency for days is indicated. Even then we sometimes under-esti-

mate the weakness of the heart and a child may succumb on slight exertion when he seems to be doing well. Careful clinicians have always recognized the importance of watching for slight irregularities in the heart action, of urging in such a case strict recumbency. In those cases of post diphtheritic neuritis in which the heart becomes involved along with a more general paralysis, we can say boldly, "Never give up." I have seen one or two such apparently hopeless cases recover that I keep up hope a long time. Persistent recumbency, very little medicine and time may work a miracle.

We recognize rheumatic fever as an acute infectious disease of common occurrence that is attended with a bacterial infection of the heart muscles and valves. I do not mean to say that the other infections may not be so attended—but certainly they are not in a proportion similar to rheumatism. Time will not permit that I dwell on the heart features of this infection. The main points are these: That particularly in children cardiac attacks are common; that only a moderate percentage of children having had say three attacks of rheumatic fever will have sound hearts; that the heart muscle as well as the valves is commonly involved; that the diagnosis of this complication is often difficult, a murmur and some dilatation not meaning that the patient may not come out with a good heart. In children the joint features are often slight or absent. Recurrences are common. It is more to the point of our discussion that patients rarely die of the first attack of acute endocarditis of rheumatic origin. They may become very ill with fast pulse and shortness of breath, etc., but they usually recover. They may be crippled but still alive. The danger lies in recurrences. In the third or fourth attack or later they succumb. As to treatment, probably opium, the ice bag, absolute rest and flat abdomen are our best aids. Then a long, slow, careful after-treatment—so hard with children—and then tonsillectomy to prevent, if possible, a recurrence.

The so-called subacute endocarditis with fever and the various forms of malignant endocarditis are not essentially cardiac cases but rather cases of pyemia, the important focus of

which is in the heart. They do not die a cardiac death.

In this paper I may not have excited the market for cardiac stimulants but I hope to have impressed the need of a proper differentiation of heart problems in the acute diseases and reasonably sensible ways to avoid their development.

GASTRO-ENTEROSTOMY.*

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The first gastro-enterostomy was done in 1881 for gastric cancer with pyloric obstruction. Since that time the indications for its performance have been enlarged to include ulcerations about the pylorus, both in the duodenum and stomach, and for that condition known as congenital pyloric stenosis.

For gastric carcinoma it is indicated in the early stages where partial gastrectomy is possible and in the later stages when there is pyloric obstruction. In cases of the first class there is, of course, the necessity for making a communication with the bowel because of the removal of the pyloric end of the stomach. In the advanced cases it is not done with the hope of influencing the disease and is confined to those cases in which the neoplasm is situated in such position that stenosis of the pylorus results.

In congenital pyloric obstruction the condition is essentially that of cancer of the pylorus. There is closure of the pylorus, from organic overgrowth of connective and muscular tissues, which is permanent; with the result that, unless another opening is made between stomach and intestine, starvation is inevitable. In the presence of such a lesion it is evident that the resort to surgery should be made as early as possible and valuable time should not be lost in futile attempts to overcome the vomiting by changes in diet, gastric lavage, etc.—the usual method of treating these cases until vitality is at such

a low ebb that death, when it ensues after operation, usually results from surgical shock. In brief the symptoms of this condition are projectile vomiting which comes on within three or four weeks of birth and depending more on the quantity of food given rather than the character of the meal. The vomitus is said by Scudder never to contain bile, hydrochloric or lactic acid, mucus or blood. The stools are scant and meconium like. Vigorous peristaltic waves can often be seen if the stomach is examined while food is being taken. In 60 to 80 per cent of cases a small tumor can be felt at the pylorus. Scudder reports seventeen cases with four deaths, the deaths resulting from lowered vitality the result of starvation.

By far the largest number of gastro-enterostomies are done for ulcers or their complications situated in the stomach or duodenum.

To get correct ideas from which to deduce reasonable indications for the performance of the operation one should know the pathology of the condition in which it is to be employed and also to know in what way the operation acts to correct the pathology.

We are on safe grounds regarding the pathology of ulcer except as to the etiology of it. The two most accepted theories are the traumatic and the infective, though the proofs of both are inferential rather than direct. Thus the traumatic theory is strengthened by the fact that the grinding portion of the stomach, that near the pylorus, is most commonly affected; and in support of the infection theory is the frequent association of ulcer with other infections in the abdomen, notably about the appendix.

In connection with the pathology of ulcer there are certain conditions which must be borne in mind. They are frequently multiple; ulceration into a blood vessel occurs in about 20 to 30 per cent of cases and the amount of blood lost is sometimes serious; perforation of the viscus may occur and may recur after simple gastro-enterostomy; induration accompanying ulcer may be massive and may be associated with perigastric adhesion and frequent association of ulcer and cancer.

*Read at meeting of West Tennessee Medical and Surgical Association at Dyersburg, 1915.

There is no adequate explanation of how gastro-enterostomy brings about conditions favorable to healing of ulcers. The hypotheses at present accepted are drainage and a change in the chemistry of the gastric juice from its admixture with bile and pancreatic secretion.

There is probably an element of truth in both theories, but if the improvement were the result of chemical changes ulcers situated anywhere in the stomach should be benefited, but experience teaches that the best results are gained when the ulcer is near the pylorus, especially when associated with stenosis of that orifice, and the X-ray shows that, unless the pylorus is closed, only a portion of the gastric contents escapes by the stoma; thus it is seen that the use of the operation is based largely on an empiricism developed through experimentation.

One would suppose that the removal of the ulcer-bearing area would be based upon the most common sense rules of surgery, and such really is the case, but in many instances the amount of induration and perigastric adhesions render the removal a very difficult if not impossible task, attended with considerable mortality, and besides, this is the class of cases in which the results of gastro-enterostomy are most favorable. Whether or not, in addition to closure of the point of leakage, gastro-enterostomy should be done in perforation of an ulcer is still an open question. The arguments for and against it are given by Elliott as follows:

1st. Gastro-enterostomy lessens tension and obviates the dangers of leakage.

2nd. Lessens the danger of perforation of coexisting ulcers.

3rd. Lessens the danger of hemorrhage from coexisting ulcers.

4th. Increases the probability of healing of other ulcers.

Against the performance of gastro-enterostomy are:

1st. Prolongation of the operation.

2nd. Increased risk of infecting the lesser peritoneal cavity.

3rd. Gastro-enterostomy does not always relieve symptoms.

4th. Closure of the perforation only is frequently followed by cure.

5th. If symptoms of ulcer persist the anastomosis can be made later.

6th. Adds to the risk of subsequent development of jejunal ulcer.

Consideration of both sides of the question rather leads one to the conclusion that, other things being equal, it is probably better to do the gastro-enterostomy and especially is this the case if the pylorus is infolded so as to at least temporarily close it. If, however, the patient's condition is such that rapid termination of the operation is necessary, gastro-enterostomy can best be dispensed with.

In Deaver's report of twenty-five cases of acute perforation with one death he states that after the perforation is secured plication and unfolding should be done to lessen the danger of hemorrhage and subsequent perforation, and as this reduces the lumen of the tube materially gastro-enterostomy is necessary.

Finally, what are the indications in the hemorrhage?

There are numerous reports of cases in which hemorrhage came on after gastro-enterostomy when it did not exist prior to the operation, and reports of other cases in which an existing tendency to hemorrhage was not stopped by the operation. One has difficulty in imagining how simple gastro-enterostomy can influence hemorrhage from a vessel whose coats have been pierced by ulceration. Certainly thorough infolding or the passing of a suture under the bleeding vessel in addition to gastro-enterostomy would add to one's peace of mind after the patient had been out to bed. Deaver's experience in ten cases is very instructive. In two cases the ulcer was removed by pylorotomy with one death; in three cases of duodenal ulcer he plicated the gut and did gastro-enterostomy with three recoveries; in five cases of pyloric ulcer a simple gastro-enterostomy was done with five recoveries. He also points out the necessity for being sure that the hemorrhage is from ulcer and emphatically urges that the greatest discrimination be employed in selecting the time and the case.

On the other hand the experience of Rodman is equally instructive. He states that in twenty cases, some of them the subjects of

most excessive hemorrhage, he has employed morphine and atropin hypodermically with the introduction into the stomach, through a tube, of eight ounces of water at a temperature of 130 degrees. The hemorrhage was checked in all cases.

In late years the tendency to do a more radical operation where simple gastro-enterostomy was done before is markedly on the increase. This tendency is the direct result of the failures of gastro-enterostomy, but knowing so little about the etiology of ulcer it will take time to tell that these more radical measures will give better end results.

One of the strongest arguments for pylor-ectomy is the association of cancer and ulcer. Ensternan, of the Mayo clinic, states that in all cases of gastric cancer there is clinical evidence of preceding ulcer in 55 per cent of cases and pathological evidence in 60 per cent. Yet Smithies, of the same clinic, states that in only four cases in several hundred in which gastro-enterostomy had been done was there subsequent development of cancer, and in the opinion of Patterson the tendency of cancer to result from ulcer is "yet to be proven."

TERATOLOGY.

By S. M. Miller, M.D.,
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Teratology treats of deviations from the normal in the development of the fetus. The subject embraces all the malformations from a slight variation, like an anomalous artery through the supernumerary digits, the meningoceles, the brainless monsters, the acardiac and amorphous fetuses, the double and triple monsters. A proper presentation of the subject would presuppose some tangible classification of the numerous types of monstrosities, but such cannot be attempted, on an occasion like this, except in the briefest way, and that only to illustrate the salient points of the question in hand.

Teratogenesis, or the theories of the causation of anomalies, malformations and monstrosities may be arranged under two heads—the superstitious and the scientific. It will

be convenient to consider these separately and pass upon the testimony in favor of each, while under review.

To seriously attempt a discussion of the question, from the first standpoint, would seem like entering again the dark ages of literature and thought, when all natural phenomena received a supernatural interpretation, when the signs of the Zodiac and the phases of the moon controlled agricultural pursuits and obstetrics, when diabolism was restrained by amulets and incantations, when the festive witch caused the cow to give bloody milk, when a deformed fetus was evidence of bestiality on the part of the mother, and measured her punishment by death at the stake. But owing to the widespread popular belief in the influences of the mother's mind on the growing fetus, and because occasional rare shadowings of these lay opinions gain superficial lodgment in the medical mind, the subject can be approached in this mildly apologetic way.

Much of the popular faith in prenatal influences has for its foundation the classic instance of Jacob getting the better of his father-in-law, Laban, in a cattle deal. It is related that they contracted for Jacob to have all the marked stock in payment for his services, and that the party of the first part forthwith set before the herd striped sticks, at the mating season, with the result that all the increase, except a few undesirables, came spotted, ring streaked and striped.

Upon analysis of this account it might be observed that the actuating influence was applied before the meeting and union of the vital elements of generation, thus putting the incident in a class altogether different from that under consideration; that the ancient patriarchs were not given to present-day interpretation of phenomena, and therefore not subject to the same processes of ratiocination, and that the twentieth century citizen has, in some way, lost the advantage of special extra-human interpositions in the government of his affairs, and must therefore seek *ex parte* conclusions.

The traditional superstition of prenatal maternal influences is so universal and is so rich a stock in trade for the sapient midwives, who

build character and reputation, as seers, from their lucid interpretation of these mysterious occurrences that scarcely a woman completes the period of gestation without having in mind a number of circumstances that she fears will mark her child. Any emotional disturbance, fright, shock, gratified or ungratified appetite, is sufficient to turn the chromocentric camera inward and imprint an exact picture of the fancy on the child's bare back. After delivery, if no spot or blemish is found, the treasured collection of fears is happily dismissed, with a sigh of relief; but if a mole, a nevus or more serious fault is evident, the list is reviewed to fit some one of the number to the case, and with the conscious or unconscious collusion of the "knowing ones" who frequent such places, the ingenious bending and twisting and fitting of details will be certainly fruitful of startling revelations. The axiom, *post hoc ergo propter hoc*, applies to practically all these cases. The process of reasoning is that first the anomaly is observed and then something is sought in the history of the pregnancy to which it can be ascribed. No experiments by competent observers have been made and no data of scientific worth recorded. The time in pregnancy at which these impressions are supposed to be made is quite immaterial; but in a large majority of instances they come long after the fetus is formed and the morphological contour of its parts fixed. Most malformations involve either an excess or deficiency in parts or tissues. It is hardly conceivable that a mental impression of the mother could remove parts already formed or add redundancies. In nearly all such cases the organ or part involved is far on in its development in the early weeks, or even days, of gestation while the determining mental influence is assigned a remoter date. Again, the human ovum, except for nutrition, is as much outside the influence of the mother's body from the moment of its escape from the ovary, as is the egg of fowl or fish. The placental villi dip into and are embraced by the glandular tissues of the uterus, but at no time or place does the maternal coalesce with the fetal tissues, nor does even the mother's blood reach the vessels of the child. No nerve structures pass from uterus to

placenta and none exist in the umbilical cord. It is difficult, then, to conceive how nerve stimuli could reach the fetus and work such wonderful changes. From the superstitious standpoint of consideration it is, however, not so difficult. In this, as in so many other things, there is a strange fascination in the mysterious, and the very things that appear to controvert most positively all reasonable human observation gain the readiest credence. The force of no rule is invoked, no scientific grouping of data employed, but by the facile process of subsequent cerebration and that romancing after the event, which measures the mediumistic status of the interpreter, are all sufficient to the desired end.

If maternal impressions can be made to explain morphological faults, they should account for them all, and conversely. all cases of fright or nervous shock, during pregnancy, should be followed by the birth of a monster. Exceedingly few women complete the term of gestation without having received startling impressions of greater or less intensity, yet the number of abnormal children is relatively remarkably small.

It will be observed that, among members of the profession who entertain this mind theory, the material employed as evidence in its support is almost invariably of the most attenuate and equivocal character. Every such one has in mind an isolated instance, based upon the *ipse dixit* of some knowing old woman, may be, as the bulwark of his impregnable faith. This one assumed case stands him in proof against a long lifetime of observation where numbers and multiplied numbers of shocks and frights and longings and morbid fancies and moods have dominated the pregnant individual without any untoward result. Is there any other question upon which an inverse preponderance of evidence like this would be made to apply? Is there any other question where the negative evidence is so positive or the positive evidence so negative? To say that the white mother of a black child has become frightened at a negro, or that the mother of a frog headed fetus had carried her impressions over from last summer before frogs had gone into winter quarters would be

a variety of logic, to be sure, but of rather a fantastic fashion, withal.

It is obviously impossible to enter upon anything like a proper discussion of the scientific side of this subject, with the space limited at our disposal, so only a few observations on recent current opinion and methods of study will be made. In the pursuit of any scientific inquiry, it is essential to formulate, segregate and specialize the material at hand, in order to judge correctly of dominant influences and persistent conditions. This is absolutely necessary in order to avoid the liability of error in studying isolated phenomena. To this end different writers have made different groupings of teratological anomalies; any selected one of which, will serve our present purpose. Take for instance that large class of cases due to lack in coalescence of the embryonic clefts producing the varied conditions, spina bifida, visceral extrophy, hair lip, cleft palate, meningocele, etc. In many of these it has been amply demonstrated that the failure of union was due to the interposition of alantoic folds and amnionic bands. Slight faults in nutritive activity of the approaching folds would be productive of any of these results. The time of approach and closure of the reduplicatures, known as visceral, parietal, and branchial folds, is just prior to the second week of embryonic life, a time in the experience of most women preceeding the knowledge of the existency of pregnancy.

Again, in another general class, embracing uniovular twins, double and triple monstrosities, the determining influence is necessarily operative during the earliest cell divisions of the primitive germinal area, at a time when the ovum is floating in the mucous secretions of the genital tract. Whether this be due to an excess of embryonic material of the egg, to polyspermia, or to physical disturbances determining multiple nuclear centers, is, in this connection, unnecessary to consider. To the relative age, and physical properties of the male and female pronucleus are ascribed the determination of sex, the transmission of inherited qualities and atavistic reversions. Also outside mechanical disturbances play a part in the arrangement and differentiation of

cell morphology at this early time. This latter view is proven by the study of changes taking place in the hatching of eggs of frogs and fish. The eggs of frogs or fish subjected to agitation, as during transportation, on railway trains, or even in rough running water, will give an enormously high percentage of malformations, similar in all respects to the anomalies of the class under consideration, and that too without reference to what the mother frog or fish thought before the egg was laid; before cell multiplication began, before insemination even. Numerous experiments have been performed upon the eggs of birds and fish and frogs, which have resulted in producing all the typical varieties of monsters observed in the higher orders of animal life; forcing the reasonable conclusion that they are resultant from definite physical and mechanical causes entirely disassociated from psychical influence. Aside from the artificial production of malformations, the study of the subject can be carried all the way down through the lower orders of the animal kingdom, and numerous parallels found to every morphological fault found in the higher. In fact as you descend the scale of organization such departures become more frequent. These are all subject to the same classifications and groupings, and are, beyond question, due to similar causes. Take for instance the failure of union of the visceral cleft resultant in hair lip, cleft palate, epispadias, hypospadias, pseudohermaphroditism, anencephalons, etc., and find numerous examples of all these conditions running along the line, from man to the infusorial border limit at the remote extreme of the fish family. Is it not more rational to conclude that physical, vital and nutritive forces, acting upon the early embryonic cell area could disturb the normal segmentation and differentiation, than that such should be due to some fantastic photography of unintentional potency, and that, too, long after the formative stage had passed, and all connection between mother and child had ceased?

Scientific subjects are frequently studied from analogies in the lower animals. An entertaining diversion would be to carry one phase of this question into that field and study

the lower forms from the higher. It would be highly instructive to elicit, in this way, the penetrating mnemonics of the mother, her cogitating upon the egg, in incubatoribus—that is, in the incubator. It would be refreshing to divine the parental psychical gymnastics of the matronly frog that produced the frog-headed froglet, or technically, polywog. These hints will suggest a field rich in untrod-den verdure.

TREATMENT OF TUBERCULAR PERITONITIS.

By W. A. Bryan, M.D., F. A. C. S.,
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Wherever it is found as a pathologic factor in living tissue the fundamental unit of tuberculosis is the same, namely, the tubercle with its typical structure and its essential bacteria. The extent of the disease is measured by the extent of the tubercles, aggregated into a single mass or several masses and by the nature and extent of complications. These complications usually mean secondary infections with ordinary septic bacteria. The prognosis depends upon the importance of the involved structure in the maintenance of vital function, the extent of the disease, the nature of the complications and the probability, in case of unimportant structures being primarily attacked, of spread of the causative organism to other near or remote sundry organs. The facts that must be impressed upon our minds that every patient who develops a tubercle has tuberculosis; that the organ or tissue in which this development occurs, while often determining the outlook has nothing to do with the essential nature of the disease; that it is tuberculosis whether lung or brain or intestine or lymph-node, or bone or fascia is invaded; that from any primary focus of infection the disease may spread to near or remote structures or become universal; that it is not sufficient to check the disease or remove a part of it, or to destroy some, even a majority, of the bacteria; that they must be destroyed in toto before a real cure is affected; and must be dealt with so that their number is reduced to a minimum and their opportunity to resume activity

is as nearly as possible eliminated, before assurance of the arrest of the disease can be relied upon.

The idea is too prevalent that surgery is a panacea for surgical tuberculosis, whatever may be embraced in that term; and I am sure that surgery has in a large percentage of cases hastened the end of its subjects by having an overweening confidence in its own efficacy without considering the importance of secondary infections and without understanding that even surgery unaided cannot uniformly succeed. The profession, surgical and medical, and the people have for some reason concluded that when a patient is operated upon "that settles it one way or another;" and it is precisely to dispute this point that this discussion is undertaken insofar as it relates to tuberculosis. It must be granted that where surgical procedure removes the whole offense wonders approaching the miraculous result; where its effort to remove is imperfect, other forms of therapy must be employed to accomplish that which surgery cannot. It is almost, if not altogether, certain that no surgical procedure ever did or ever can remove all the bacilli or tubercles from a patient afflicted with a serious form of surgical tuberculosis, and absolutely certain that such is the case in tubercular peritonitis. These cases all had tuberculosis when they came for abdominal section; they all have it when they depart from the surgeon's care "cured." And it resumes or continues its course only too often, or causes more serious invasions in other structures, after the operation has done all it could do; and it is of no ultimate value to check a peritoneal tuberculosis only to have it supplanted by the pulmonary form, or military, either of which is more serious than the peritoneal form.

I am not condemning surgery as a means of relief; but simply the idea that surgery is the sum total of treatment. It is only a link in the chain. Every case of tuberculosis is medical before it reaches the surgeon, and it remains medical after surgery has contributed its quota toward relief; this is the true *par excellence* of tubercular peritonitis; and the reason we fail to cure our cases permanently is because we have refused to learn that they are not curable—not often—by surgery alone.

The treatment of tubercular peritonitis is the

same whether it is a primary condition—by which I mean true primary invasion of the peritoneum or an extension to this membrane from a focus in some abdominal organ, usually the vermiform appendix or the Fallopian tubes—or secondary to some remote lesion, such as pulmonary tuberculosis. In the one instance the peritoneal lesions threaten to invade other structures and thus endanger life; in the other they follow and interfere with the cure of the primary focus. In the first instance the peritonitis must be relieved as a matter of prevention (it rarely kills *per se*) and in the second as a matter of favoring the cure of the more serious primary focus.

There can no longer be any doubt in the mind of any well informed physician that the number of surgical, that is to say, operative cases of tuberculosis is constantly diminishing; for large numbers now respond to non-operative plans of treatment, which formerly were curable only by operative measures, and that infrequently enough. Still this change does not warrant us in discarding surgery from the domain of tubercular therapy or even in hoping that such a dream may ever be realized. It does, however, establish the fact beyond any question that more satisfactory results may be obtained by less radical and less mutilating surgery. The further fact must also be admitted, namely, that surgery may, nay, even must be called upon to render service when by its employment the period of time required for cure may be considerably reduced from what would be required without surgery. The treatment of surgical tuberculosis has, therefore, reached a stage where it requires that correct judgment be rendered on the following points: First, whether with our continually advancing knowledge of treatment the case in hand requires surgery at all. Second, whether the duration of the disease and the net ultimate results would justify the non-operative course; naturally the financial condition of the patient and the time at his disposal enter very materially into consideration here. Third, when surgery is unquestionably necessary, how much may the operation spare in time, in shock, in tissue that could not have been spared when surgery was expected to complete the work before the anaesthetic was removed. Surgery is no longer to be considered as do-

ing an operation; it must be guided by wisdom and judgment that keep pace with the real advancement of the profession. Anybody can remove a kidney; who can save it? Anybody can give some chance of cure; who can give the best chance? Anybody can mutilate; but who can spare the structures wisely and restore their functions? These are the questions the profession must answer for the people in the future, or, if we do not, the people will answer for themselves. It is not all of surgery to operate, and he who can spare an operation or reduce its magnitude and at the same time increase the results cannot fail to command our attention.

What then shall we do in our cases of tubercular peritonitis? First, in those cases which are secondary to tubercular processes outside the abdomen; second, in those cases where the condition originated within the abdomen; third, in those cases which having originated within the abdomen have later become complicated by secondary processes in extra-abdominal structures. In answer to these questions it may be wise to hint that here, as in malignant tumors, it is sometimes necessary to do surgery in manifestly incurable cases, in the so-called inoperable cases. Therefore, in any of the three supposed instances, it may be necessary to operate for the relief of pain, or pressure, or tension or other symptoms, the relief of which may prolong life or add to comfort, without in reality being able to add thereby to the prospect of cure. In them all where the case is clearly hopeless we operate only for such reasons as those assigned above. And only as much as such symptoms demand.

Let us suppose that a case of tuberculosis of the non-surgical type, say pulmonary tuberculosis, which has not advanced to the incurable stage, should develop tubercular peritonitis; what shall we do? The patient has a sufficient load to recover from his pulmonary lesion, and whatever we might do with his peritonitis by non-operative measures if the lungs were clear, he cannot ordinarily hope to be relieved of both lesions or of either in the presence of the other. Therefore, it is wise to operate and deal with the peritonitis, as will be outlined later. And this has been borne out unquestionably by our experience. Not only is this so, but where a curable pulmonary case

suffers from any other serious or distressing surgical lesion we have found it imperative to relieve the surgical condition before any marked improvement has been made possible in the pulmonary lesion and in every instance we have observed almost magical improvement so soon as the surgical condition has been relieved. The cases already dealt with embrace hemorrhoids, fissure in ano, fistulae in ano, appendicitis, acute and chronic, and diseases of the generative organs—lesions sufficiently varied to warrant the general conclusion that surgical conditions which complicate pulmonary tuberculosis, whether arising from it or independent of it, whether preceding or following it, must be relieved if the best hope is to be offered. This is important from every angle, for the profession as well as the laity is too fully impressed that patients who have tuberculosis must not be operated on because they have tuberculosis, while it has been proved beyond cavil that the surgical lesion, if worthy the name, is the chief obstacle in the way of cure. Hence, operation in such cases is no longer a matter of election based upon the dangers and risks of the surgical condition and operation respectively; but it becomes imperative because it interferes with the recuperative powers of the tubercular patient just sufficiently to hold him beyond the pale of modern therapy.

The second question raised was, What shall be done in those cases of tubercular peritonitis which have originated within the abdomen? The organs which usually serve as the starting point of this form are the appendix in men, and the appendix and Fallopian tubes in women, although various other lesions in the abdomen serve as the starting point in the minority of cases. The danger here is the continued spread of the process until the whole peritoneum is invaded and certain of its organs irreparably crippled or the escape of infection from the abdominal cavity and invasion of the remote organs. There is a rule, the validity of which I can vouch for, but the explanation of which I cannot give, that when the primary focus of a tubercular process is removed the remaining secondary lesions are more amenable to treatment. And in keeping with this rule, the structure, whether appendix, tubes, gall bladder, whatever it may be, should

be removed and the peritoneal invasion dealt with as indicated further on. The primary offending structure must be removed if possible, for its ravages may not be counted in terms of peritoneum or abdominal viscera, but in remote invasions of varying importance. I believe it wise in this class of cases that even resection be performed, where by so doing an unquestioned primary focus can be removed, provided, of course, that the peritoneum at the point of resection is sufficiently intact to warrant its firm union, a provision that will too frequently deter the surgeon from such a radical procedure.

The third question raises the point as to what course shall be pursued when the lesions arising within the abdomen have resulted not only in peritonitis, but in remote tubercular processes. The same factors favoring cure obtain here that were mentioned above, namely, that removal of the primary tuberculous masses only rids the patient of so much disease and functionless tissue, but renders the cure of the remaining secondary lesions much more probable. In the item in hand it renders double service, for not only does it offer the best chance of cure of the peritoneal pathology, but puts the patient in condition to fight the remote secondary conditions, just as we have already shown, the removal of the diseased appendix, for instance, was a *sine qua non* for the cure of a pulmonary tuberculosis which preceded or followed it. It is the last straw, the least straw, that kills a tubercular patient; and where we may by safe surgical measures remove so much or more from the burden of these patients we must not hesitate. Instead of fearing the anaesthetic may make their disease worse we know the condition for which the anaesthetic is administered renders their cure impossible, or nearly so.

I do not wish to enter into details of the surgery required in tubercular peritonitis, but simply to state that opening the abdomen is valuable even when nothing else can be done; it is more valuable directly in proportion to the extent of removal of tuberculous foci, and less valuable directly in proportion to the amount of permanent damage done to vital organs by the disease. But attention is called to it chiefly to emphasize that where surgery has completed its work, when the wound is firmly

healed and the patient dismissed, the work is only begun; surgery has only made cure possible; and we will be successful or fail upon our recognition of this fact. To be sure some will recover; yet a proper consideration of the patient's welfare demands not that we offer a chance of cure, but the best chance, and this can be offered only when the surgeon who has finished his work turns the patient back into the hands of the internist with the clear understanding of physician and patient both that he is still tubercular, as much so, though not as hopelessly so, as before the operation. The same rules ought to be applied then as are necessary to aid the body in destroying the bacilli in other instances. Food and air and rest, and tuberculin, regime and sunshine, sunshine that tans black, are as necessary to the peritonitic as to any other, in many instances more so. I hate to admit it, but candor compels me; surgery cannot cure tuberculosis; it only helps to cure and must be accepted as of highest value only when it is employed as one of the several great items which result in cure or arrest of the disease, and which the world has fought so long and so hard to bring into their proper relation to each other. The cure of tuberculosis requires that we bring every available factor into action, just as the man who was away from home and received a telegram from his wife saying "Mother is dead, shall we embalm, cremate or bury?" His reply was, "Embalm, cremate and bury; take no chances."

CONTACT POINTS OF THE MEDICAL PROFESSION AND THE PUBLIC.*

By A. D. Dancy, M.D.,
Jackson, Tenn.

Gentlemen of the West Tennessee Medical and Surgical Society:

As your President, the great honor bestowed through your graciousness, rather than any merit I may possess, grants me the privilege of speaking to you upon this occasion.

I first want to repeat my thanks, which were poorly expressed at our meeting at Union City.

*Presidential Address West Tennessee Medical and Surgical Association, Dyersburg, May, 1915.

I feel proud that I am chosen to preside over a Society representing such a large number of the best physicians of the best state in the Union, and it is especially pleasing to address you in one of the best and most hospitable towns in the state.

The subject of my address is, "Contact Points of the Medical Profession and the Public," and I ask that you bear with me while I depart somewhat from well trodden paths of medical addresses.

Public health work marked the beginning of a new era in the relation between the public and the medical profession, but since time was, the public has been in constant contact with the physician.

The General Practitioner and the Public.

One of the direct contact points between the public and the profession has been brought about by the emergence of the general practitioner into the light of publicity. Long has it been an article of faith with the general practitioner that his work concerned only his patient and himself, and that the relationship was a private one. And he impressed all with the fact that this was private practice. Long has he shunned anything that brought publicity to his work. He felt that his sphere of work was, and should always be, the bedside and his private consulting room. The public today turns the searchlight of publicity upon the physician, and today he works under its white glow.

The modern public no longer shows the same confidence in the profession, and it is even more significant that, led by such men as Richard C. Cabot, a large number of the "Young Turks" of the medical profession are declaring that many charges made by the public are true. The public is profoundly impressed by such plays as Bernard Shaw's "Doctor's Dilemma," and the press sounds notes of criticism through its editorial columns, accusing the profession of commercialism, imperfect differentiation of medical science, and conspiracy to hide its own shortcomings, and those of its fellow-practitioners. Bernard Shaw sums up his conclusions, saying, "That until the medical profession becomes a body of learned men, supported and protected by the Government, the public shall not change its attitude, nor cease its accusations."

The public has searched into the comings and goings of the professional men. It has made inquiries as to his moral character, his income; and the value of his labor has been the theme of the political protector of the public purse. The public has demanded that all his prescriptions be filed, and if asked, his diagnosis and treatment of disease be criticized.

Many changes have taken place, and though the younger members of the profession fall in line, the older rebel at the new order of things.

This new order of things bewilders us, and yet, now that the light is filtering in upon us, we see, in the near future a larger range of vision, a new association, a greater work, a closer contact with the public—not as private patients, but as public patients, sick with waiting for teachers, sick with waiting for the physician to throw aside the wise nod of silence and teach them Preventive Medicine, and keep his pounds of cures.

More and more is the physician's isolation being annulled, and even in my short apprenticeship in the field of medicine, I have noticed a change in the relationship between practitioner and public. We are here to discuss the problems of everyday medicine and surgery, for what? Not for our personal gain, for many, commercially inclined, remain away, but to better public health and happiness. We also gain the pleasant contact of Fraternalism, which is breaking down the barriers of professional jealousy and giving us the power to deny that we conceal the incompetent physician and conspire to hide our shortcomings.

The general practitioner is rapidly coming into his own. He is asking representation in the administration of public affairs. No public committee is complete without the representatives of the profession, and with this closer contact of physician and public, the physician's condition is bettered and he is educated in public affairs, and in turn the public is educated in medical affairs, and in this contact we may hope for the solution of many of our national problems.

The relation of the practitioner with the public will not be affected by this public contact in its essentials, and if there be a change of attitude, it will be for the better understanding of the public and the better appre-

ciation of the profession, without the loss of the personal equation between patient and physician.

This personal and intimate relation between the general physician and the patient, in itself, has preserved the general practitioner for all time as the contact means of the general profession. The specialist, to whatever part of medicine he may limit his practice, in this day often has not known this personal contact, and it only through the general practitioner that his problems may be solved. In these days of specialism, the general practitioner thinks that he labors under a disadvantage, and yet, in this new era, he is in the dawn of larger opportunities for investigation and public usefulness.

State's Support of the Profession.

The medical profession, in the past, has been dependent upon private endowment for medical schools, but a comparative study of the medical schools of the world gives no reason to expect adequate support from private sources. Nor is it desirable that medicine should depend upon private support. The time has now come for the medical profession to ask for support for medical schools and research work from the state.

In the interest of the public, we should ask adequate support for medicine in order that medicine in turn may properly perform its great function for the state, and that the public may be benefited from the great possibilities offered by preventive medicine and medical research. The state expends large sums in taking care of its live stock, and the press will use columns to point out preventive measures to the farmers, and we should have the same consideration.

The American Medical Association, as you know, started a campaign of publicity and offers to supply lecturers on any subject pertaining to public health. Their lectures have been profitable, but in many ways, the work has been in vain, on account of the inadequate support of the state. I offer this penetrating remark: It is peculiar that a man who owns a herd of cattle will go to look at them every few days, and not once during a year will he visit the school room, where his children are, to see that health conditions

are properly observed, and I am forced to think that our state labors under the same condition. School inspection and all measures of this kind should be supported by the state.

This is the time for great improvements by the state and the nation. Public health is an asset. In it lies the strength of the nation, and the future of our country is in its health, not its wealth. Without a spirit of criticism towards the old order of things, I may say that many proprietary schools of our state furnished education for, and aimed at, the production of the bread and butter type of good practical doctors. The difficulties under which the instructors in these schools labored, of necessity, made them take a narrow view of the ultimate aim of medical instruction. The consequence of this order of things brought about a wild scramble for students, engendering bitter competition of schools, and a large number of graduates sometimes poorly prepared.

I feel that that the ideals of the medical schools should have been controlled by the state, by giving such adequate support as would have enabled them to exist without these attendant evils.

The Medical Profession a Public Asset.

In this day there is a tendency to place a financial rating upon everything. Even life itself is the risk and structure upon which is builded our great insurance companies. In this day of commercialism we deal with everything from a purely monetary standpoint. We must admit that human life and health are the most valuable assets of our nation. If this be a true statement, then the nation should husband this most valuable asset with the same care with which she handles her commerce, her products, and the other resources which make her a world power.

The masses are enthused with politics and seek to elect those whom they prefer. They argue the great questions of state and national politics from the goods-box to the halls of Congress and the chambers of the Senate. Sherman anti-trust laws are enacted, and the masses concern themselves with all the great financial questions of the day. They rise and become interested when their personal fin-

ances are involved, and yet they concern themselves very little with the great questions of public health. I acknowledge that very little progress can or will be made until the masses are better educated along medical lines.

Here, in our dear Southland, we must combat against ignorance and indifference. We are still feeling the power of superstition and vice, and here, where the negro is our ward, we must help in educational efforts.

The press of our country is a free press, and I am proud of its Yankee air, with its freedom from censorship and fearlessness of lese majestie, yet the medical profession, from its lack of organization, fails to use the main artery that supplies blood to the brains of the waiting laity, for fear of violating the hide-bound precedent of the past. Do not understand me to say that we shall use the press to advertise our most noble profession and pull down its highest ideals. It see a waiting public, a willing press, and law makers, who, if educated properly, stand ready to accept instructions from the medical profession. Arouse the masses, join the progressive forces, and medicine, with its honored history, will come into its own. We shall see a physician in the cabinet and a physician in office at the capitol of every state, and every municipality will require his services as the most valued officer of its government.

I observe, with great satisfaction, the work being done in our schools, the great beginning point. The organized medical forces are moulding these future citizens of our nation by teaching them laws of health, and in the great work of school inspection, they are opening possibilities for these children, making it possible for them to bear a normal relation to life, by correcting faults of their physical beings. We know that a child bears that relation to the external world, as its special senses are attuned to its perceptions, and in many of these defectives, we are opening avenues through which they may gain knowledge under more favorable conditions. Yet, as we look at this work as it now stands, we must think that the lives of our children are of less consequence than the cultivation of our crops and their welfare of less importance than our live stock.

The value of the average person, from an economic standpoint, is \$2,900 to \$3,000. Can we afford to neglect their health? Can we afford to have their economic value lessened? Epidemics depopulate communities, and our means for combatting them are in many instances insufficient. The nations of the earth are awakening to the economic value of human life, and even in such times as these, when nations are losing millions, they are striving to conserve their race. "The survival of the fittest" has forced the Czar to prohibit vodka and caused the Emperor of Germany to issue orders for the physical good of his people.

Corporations, with all their greed for gain, recognize the economic value of health and have men in the field constantly striving to bring out a hundred per cent efficiency in their employes. Model factory towns, with competent physicians in charge, are carrying out plans of education along lines of health and hygiene, and everything that can be done to better the mental, moral and physical well being of its employes, is being carried out. Great efforts are being made in our great cotton mills. The regulation of child labor, the investigation of the hookworm and other great movements show that corporations place health in the columns of assets.

I was very much impressed with the distribution of literature by the insurance companies along lines of conservation of health. I have seen much of this literature for the physician, the nurse, and the people, and it is attractive and good. The companies have been able to pay their policyholders greater dividends both in money and in health. In spending millions in such literature, the great insurance companies have increased their assets in a permanent manner, for health propagates health.

The press of our land offers space for the discussion of matters of health and this would afford us means of reaching and educating the masses. I recently read an article in Collier's, which told of a druggist in Knoxville, who, realizing the ignorance of the public and the silence of the medical profession, placed a sign in his store reading thus: "Patent medicines are sold because they are so well ad-

vertised, but if you are sick, consult a physician and I will fill your prescription."

Lay Opinion of Medical Ethics.

The medical profession has been subjected to ridicule in regard to its standard of ethics. The physician has been accustomed to, and I dare say, hardened to, these attacks. Unfortunately the press at this time will attack anything or anybody, so long as its finances do not become jeopardized. This branch of the press of this country, generally speaking, is so commercialized, that its chief aim seems to be to get money and to cater to a gossip loving public. The magazines, too, also cater to the public, by writing upon subjects, which in their incompleteness, are unscientific compositions, dangerous to the lay mind.

I have referred to the articles appearing in magazines relating to our standard of ethics. These articles in which literary outlaws, of the type of Bernard Shaw, attack the profession with scattered accusations regarding inaccuracy and incompetency are harmful. I think the day is at hand, when we, as a profession that has stood the test of time and identified with the people in a relationship more intimate and closer than the bonds of kinship, should resent their unfair attacks in as forcible manner as possible.

No man, who studies the progress of medicine, the continued effort upon the part of doctors themselves to improve the standards of medical education and the personnel of the profession, could make such statements as are outlined in these articles. I can readily make allowances for such erratic statements from Mr. Shaw, but how can we reconcile ourselves to statements made by such a man as Dr. Cabot? I cannot see how a profession that stands ready to correct evils of its fellows can be so condemned. We must admit that there are many faults in our code of ethics and yet it serves wonderfully well, considering the rapid changes that are taking place and its contact with a commercial atmosphere.

Many well established governments have outgrown their basic organs, and the organs must be changed to meet the conditions of the times. We shall always have members of our profession who will justify criticism at

the hands of the public, but we should not have general condemnation from magazines of a type and character that grip the minds of intelligent people. We must feel that our best course in combatting these unjust criticisms of our code of ethics and these sensational attacks upon the members of our profession, is the pursuance of a strictly honest and honorable course, planning our work beyond the reach of a critical public. Many times a conscience tempered by honesty and uprightness shall itself elevate us above the atmosphere of criticism.

The public is being brought closer to the profession by legislative measures that bear so closely upon it. In our State of Tennessee, we are awakening to the fact that we are behind many of our sister states in matters of legislation. I refrain from mentioning the many measures at this time, for fear that the editor of one of our West Tennessee papers may accuse us of trying to form a medical trust, and refer here, in part, to his article of recent date.

"No one can object to reasonable laws for the protection of the medical profession, against the inroads of unscrupulous persons who assume to administer drugs without passing the proper examinations. Such laws are a protection not only to responsible physicians, but to those who take drugs. It is not laws of this kind to which critical reference is here made, but all fair-minded people must protest against the frequent effort to force the passage of statutes designed solely to propagate one branch of the healing art and to exterminate all others. These attempts assume various and sundry forms, but all can be traced to the one source, which is nothing more nor less than the desire in certain quarters to establish a state school of medicine. The program includes compulsory inspection, compulsory vaccination, compulsory medication, for every known or guessed at disease, and the entire propaganda naturally culminates in thinly veiled attempts to stifle all efforts to heal disease unless done in conformity with orthodox methods."

Members of the West Tennessee Surgical and Medical Association, "it is a long way to Tipperary" and we see in this that sane individuals presume to indicate that the profes-

sion in its effort to have laws enacted for the public good are guilty of an attempt to throttle the privileges of others for their own financial betterment. We should confront these matters by an educational propaganda and should act as a unit in not leaving these matters of vital importance to a few professional men, and allowing a spirit of apathy to reign among the rank and file of our profession.

The public is willing to admit that the medical fraternity is adorned with its full quota of altruists, and yet, now as never before, is the public discussing our proposed legislative measures and is willing under the slightest provocation to accuse us of passing laws to protect physicians and trample under foot the rights of others. I shall not here enumerate our possibilities along legislative lines which would make the public better understand our high ideals and purposes. Though the public may criticize the profession in its efforts along these lines, yet the battle for state and national health is not the profession's, but the public's. It is a community, a state, a national problem. It is no more the business of the doctor to prevent disease, than it is the business of the lawyer, the banker, or any other person, whatever his vocation may be. No profession can do this work unaided.

I know, before me sit men grown old in the service of the profession, who continually strive to destroy the source from which their revenue is derived. We have produced men of the type of Gorgas, who have taken the public into our confidence, we have lectured to them on medical subjects, we have carried campaigns against preventable diseases, without hope of compensation. We have fought the mosquito and given the lives of martyrs on the altar of health. The house-fly has been properly condemned and the cancer problem has been discussed publicly.

We have met many defeats at the hands of the public in our efforts. After all, the public shall be first, and we shall always be servants of the public. We shall, through the ages, continue to minister to their physical ailments, and like fathers with children who do not obey, we shall continue to lecture them. I think I see now the doctor in the small

community, where doctors come so close to their patients, sitting in front of the drug store of which he is a patron, discussing with each passerby the topics of the day, answering inquiries about all matters pertaining to the health and happiness of the community and exhibiting the true missionary spirit that we see passing from the clergyman to the doctor.

The good Samaritan was a doctor, and the profession of medicine shall out last time and be rewarded in eternity.

THE VALUE OF AUTOPSIES IN HOSPITAL AND MEDICAL PRACTICE.

Herbert T. Brooks, M. D.,

Professor of Pathology, University of Tennessee.

Memphis, Tenn.

The value, to an internist or a surgeon, of a carefully performed autopsy whose case before death was imperfectly understood in certain of its aspects is generally admitted. Yet notwithstanding this there are many cases of death which only an autopsy could clear up with certainty that are allowed to pass without the least effort toward the securing of one.

It is an interesting observation of every student of its history that the development of scientific medicine in any country is inaugurated by the systematic performance of autopsies. Everyone will admit that Germany and Austria today are the countries most advanced in scientific medicine. Yet a review of the history of international medicine shows one that in the first half of the nineteenth century Germany stood behind both England and France, but during the latter half of that century medicine in Germany was raised to a position of greatness and superiority by the influence of one man, Virchow, and he a pathological anatomist. He maintained that every disease is the expression of some anatomic and visible process, and therefore the only method to arrive at a correct knowledge of the disease was to correlate the clinical findings with the findings at autopsy. Virchow made his laboratory an independent scientific institution and the great pathologic institutes that one sees in

Germany today are of his spirit. They form the all important pillar of German pre-eminence in medicine and serve as the most striking example of the influence of pathologic anatomy on scientific thought and development in the line of medicine.

The importance of Vienna as a medical center was largely due in its earliest history to a solitary man, Rokitansky, also a pathologic anatomist. He became the founder of a school of medicine which soon was to be famous the world over as one offering the best opportunity for the study of clinical medicine and of pathologic anatomy. He emphasized in all of his teachings that pathologic anatomy was the foundation of clinical medicine.

There are certain very common diseases which are very imperfectly understood in certain of their aspects and a correct knowledge can only be worked out by the pathologic anatomist at the autopsy table, having as a guide the clinician with a complete record of the body that he is to autopsy. As an illustration I mention athero-sclerosis, a practically constant finding in all adult autopsies, a frequent clinical or associated clinical finding. It is not traceable to any micro-organism, the part played by alcohol, is to say the least, uncertain. Such a lesion can be worked out in time by the clinician, assisted by the records of accurate autopsy findings. Even if one does know the cause and the rational treatment of a certain disease, that should not by any means be the excuse to let a body go unautopsied. As an illustration—we know the specific cause of diphtheria and we likewise know that it can be largely controlled by anti-diphtheritic serum, but the problem of the nature of the lesion not only in the throat, but also in the other vital organs can be solved only by a carefully performed post mortem examination. As an example, a child dies suddenly during what appears to be a mild attack of diphtheria, the cause of which death is not understood until the heart is examined at autopsy and found to be extensively diseased. From this one would very naturally conclude that diphtheria is a disease which shows a tendency towards a characteristic involvement of the heart. A fact thus established is of the greatest practical impor-

tance, as it directs the attention of the physician to that which he must guard against during this disease.

Another illustration is tuberculosis. The tubercle bacillus is definitely known to be the cause of tuberculosis, but the manner of infection is by no means settled. Certain competent pathologists take the position that the primary infection always takes place in childhood. Certain experimental work points to the intestinal tract as the primary seat of entrance. The so-called Hodgkin's disease, now believed by many good authorities to be due to a form of tubercle bacillus, can only be definitely worked out at the autopsy table. The nature of the various blood diseases can only be definitely settled by a pathologic anatomist in a systematic performance of autopsies.

The performance of autopsies assumes a far greater importance in the collection of reliable statistics. A correct scientific diagnosis of a disease such as is essential for a useful record can be made only after death by one trained in pathologic anatomy. The statistics of all American Boards of Health are valueless from a scientific standpoint. All clinical diagnoses dependent upon indefinite symptoms, as many are, can only remain as a guess. There can be no certain clinical diagnosis, and even if the autopsy shows the main diagnosis correct, it practically always shows in addition important associated lesions which may escape the most careful clinical observer. Dr. Cabot, of Boston, in his table of percentages of correct diagnoses in a large series of autopsies, shows only a few and easily diagnosed clinical conditions exceeding 75 per cent, such as diabetes mellitus and typhoid fever.

It was reported to me in Vienna that Dr. Kovacs', an eminent diagnostician, percentage of correct clinical diagnoses was only 30 per cent, while Von Norden was much less. If this is true in such cities as Vienna and Boston where the opportunities for careful and accurate work are so good, what do you suppose it would be in our Southern cities? I think it is time that all physicians in the practice of medicine should endeavor to place the science of medicine on as high a plane as possible. But I must say that there is one

essential feature for the accomplishment of this which is oftentimes ignored, and that is the insistence or lack of insistence for an autopsy on all doubtful or obscure cases. One might think, and very probably most do think, that the fault is with the laity and the fact that they are not accustomed to such, but I tell you it is the physician who is largely to blame. One would be surprised to find how easy it would be to secure an autopsy if gone after in the right manner. The clerk of the Memphis City Hospital tells me he is able to secure permission for autopsies on 75 per cent of all cases that he asks for. I believe that I am correct when I say that the practice of medicine today in this country, especially in the South, is most largely unscientific. I doubt very much if the average percent of accurate diagnoses would be 30 per cent. I cannot imagine any statistics more incorrect than that of Boards of Health relating to the causes of death.

As in Germany, the practice of scientific medicine in this country, will be begun with the inauguration of systematic post mortem examinations. If all of our charity hospitals should require of all patients an autopsy in the event of death, and if our large cities would maintain a coroner's physician, interested particularly in this line of work, and the Board of Health be given sufficient authority to require autopsies on all deaths with indefinite symptoms, one could safely assume the early advent of the practice of real scientific medicine.

LOCAL ANESTHESIA IN RECTAL SURGERY.*

By Paul DeWitt, M.D.,
Nashville.

In the whole domain of surgery under local anaesthesia, no one field offers such uniformly good results as does the ano-rectal region. Many operations in this locality can be most successfully and safely performed in the office or at the patient's home. Of course, local

*Read before the Middle Tennessee Medical Association at Murfreesboro, November, 1914.

anaesthesia has its limitations, but seventy-five per cent of all ano-rectal surgery can be done in this manner. The great majority of pathological conditions around the rectum are, of themselves, not dangerous as to life and for this reason many sufferers prefer to continue with their ailments rather than submit to general narcosis and a hospital. Advertising quacks reap rich harvests in this region, because they advertise cures without the knife and without the dreaded name of operation, which, to the average mind, means ether and hospital.

As is true of hernia, so is it true that certain nerves supplying the anal region can be cocaineized. The lesser sphincterian nerves, coming from the fifth and sixth sacral nerves, enter the external sphincter muscle on each side of the posterior commissure. By cocaineizing these nerves, the sphincter can be most successfully dilated, which is a very necessary procedure in many instances.

As to drugs and solutions, all sorts and strengths have been used; the solution indicated here is cocain 1-5 of one per cent, or one grain to the ounce. Quinine and urea hydrochloride is frequently advocated because of its non-toxicity and the prolonged analgesia, which lasts from an hour to several days. The writer has had a very limited experience with it and is using it now, after completion of the operation with cocain, to prolong the analgesia for the relief of the after-pain which comes in the majority of cases, whether with local or general anaesthesia.

Usually 1-4 grain of morphia is given twenty minutes previous to operation, hypodermatically, but in minor cases it is unnecessary. The usual method of cleansing the bowel by oil on the day previous, followed by irrigating the lower bowel with saline before operating, and the shaving and cleansing of the parts locally, are carried out.

Dilatation of the sphincter is effected by inserting the needle point into the skin of the posterior commissure one-half inch from the anal margin and instilling several drops; waiting one minute, without withdrawing the needle, the point is carried to one side into the sphincter, one-half inch from the anus

and twenty or thirty drops instilled. The same is done on the other side. These injections are made without withdrawing the needle from the original skin puncture, thus lessening the danger of carrying in infection by repeated punctures. In five minutes, the analgesia is complete and the thumbs are gently inserted into the rectum and a massage and stretching is carried on until the proper dilatation is effected. Hirschman recommends an electric vibrator with a cone-shaped vibratode for dilating, and I am sure it must work well.

External hemorrhoids.—In the removal of external hemorrhoids, dilatation may or may not be necessary. The needle is inserted into the skin around the mass and several drops deposited, it is then carried into the base, which is fully infiltrated. In two minutes analgesia is complete, incise the muco-cutaneous margin, isolate the pedicle, ligate and remove. This is done with each individual mass. Skin tabs are frequently very annoying, and their removal is effected in the same manner.

Acute thrombotic hemorrhoids.—An acute thrombotic hemorrhoid is caused by the rupture of a blood vessel with infiltration of the cellular tissue. To remove them, inject the solution into the muco-cutaneous covering, not down into the clot, and incise in the longitudinal fold. The clot is best removed with forceps, rather than by squeezing, to prevent trauma. The incision is not sutured.

Internal hemorrhoids are of the capillary type, which bleed persistently and cause much pain; or are of the varicose type, which bleed occasionally, protrude and cause little pain. Dilatation of the sphincter is necessary in both types.

With the small capillary hemorrhoids, a fenestrated speculum is necessary. It is introduced and the tumors allowed to fall into view, when they are infiltrated, ligated and removed, or, are burned with a cautery at red heat. If the cautery is used, the burning should be carried well down to the base, and sodium bicarbonate should be insufflated into the rectum. The varicose type, which forms a larger mass, are injected at the base, pulled down, ligated and removed. Suture-

ing over the stump is frequently done, but, according to Tuttle, they get well just as quickly without suture. I have removed large masses with the cautery without discomfort to the patient, but, as a rule, it is contraindicated because the surrounding parts are not anaesthetized to the great amount of heat necessary.

Fissure in ano is really a small ulcer, which by constant irritation causes the sphincter to contract spasmodically. This spasmodic contraction irritates the fissure and the fissure irritates the sphincter, thus producing a vicious circle. Obviously, a thorough dilatation is necessary. Divulsion, I believe, is very seldom, if ever, justified because of the resulting dull aching pain which accompanies it and often lasts for days. A thorough dilatation, performed slowly, but forcibly, will have the same effect in curing the fissure without the disagreeable trauma. After dilatation, the base of the fissure and with it the sentinel pile, if present, are fully infiltrated, causing the fissure to rest on a bed of water, thus securing complete analgesia. If only a simple fissure of short duration, an incision well down into the base and out into the skin will cure. If an old brawny base with sentinel pile exists, excision of the whole area is preferable.

Fistulae of the simple, uncomplicated, non-branching variety is amenable to local anaesthesia. Extensive, branching complicated fistulae require too much dissection and must be operated upon under general narcosis. After dilating, the tissues surrounding the fistulae are infiltrated and the usual incision made, followed by curetting. Frequently, a probe may be passed through and the whole area dissected out around it; this is true when the opening does not involve the whole external sphincter.

Peri-rectal abscess sometimes burrows deep into the tissues; when this is true, forming really an ischio-rectal abscess, local anaesthesia is insufficient, because deep and extensive incisions must be made. However, the great majority of rectal abscesses are not so extensive and can be handled locally. The skin and tissues beneath are cocaineized and incised, pus evacuated, the cavity sponged

out and gauze drainage inserted. The cavity may even be mopped with carbolic acid, if thought necessary. In these cases the secret of success is free incision on the skin surface, and drainage until the cavity heals from the bottom.

External hemorrhoids, simple fissure, skin-tabs, fistulae, and small abscesses may be operated upon in the office and the patient not required to go to bed, without any danger whatever. After internal hemorrhoids it is better to remain in bed two or three days to guard against secondary hemorrhage. With all these conditions the bowels are not moved for three days, when a large dose of oil is given. Just previous to the movement, an enema of sweet oil and glycerine, equal parts, is given to lubricate the tract, rendering the movement less painful. The bowels are kept **open** thereafter. After hemorrhoidal operations the patient should report at the office two or three times a week, when the finger is inserted into the rectum and the sphincter massaged, this keeps the sphincter from rigidly contracting and lessens congestion.

Strict cleanliness during and after rectal surgery is very essential. This area is uncleanly enough at best, but by careful preparation beforehand, aseptic surgery and proper after-care infection can be kept down. A mixed infection here causes delayed healing and may even be dangerous to life.

By using judgment as to which cases to operate upon with local anaesthesia and not making mountains out of mole hills, we can successfully relieve the great majority of sufferers from rectal troubles without putting them to sleep, without the expense of a hospital, without long detention from business, and all this to the relief of suffering, the glory of scientific surgery and the discomfort of the charlatan.

FISTULA IN ANO.

By D. R. Pickens, M.D.,
Nashville.

It is not my intention to offer anything new or original in this paper but to review some well-known facts, with a few remarks in re-

gard to the treatment of a condition that is so often neglected by our best surgeons. It is thought by the laity and a great many physicians that anyone can operate on a fistula, and so they can, but of what avail is any operation that does not cure the patient, or I might say oftentimes leaves him in worse condition than he was before? Not until we correct this common idea and our surgeons give these cases the necessary after-treatment can we hope for better results. I know of no condition so simple and yet so difficult to get satisfactory results as fistula in ano.

Our neglect and carelessness in rectal cases does more to support quacks than in any other class of work. Statistics show that less than 50 per cent of operations performed for fistula in ano are successful, and out of 2,196 cases collected by Tuttle less than 45 per cent are even claimed as cures. Tuttle also says: "A very large majority of the cases of fistula operated on in hospitals and treated by general surgeons are failures, so far as cure is concerned." At any rate the operations and treatment of fistula in ano as practiced today are far from giving satisfactory results in a great many cases. There is little doubt that it requires more skill and time to get results in fistula in ano than it does in the average abdominal section; and I believe men who have had experience with both will agree with this statement. The common practice of trusting after-treatment to the interne, who has had no experience, or to an incompetent assistant has been held responsible for some bad results.

The successful treatment of any disease depends upon knowing the cause and treatment of same, therefore I would say the best treatment of fistula is prophylactic. We know the cause of fistula is abscess, and it might be said that every fistula is the remains of an abscess cavity, excepting of course the few that are traumatic in origin. So, then, if we would practice early and free drainage of each abscess about the rectum, with proper treatment until healing occurs, we will have cured many fistulas without permanent injury to the sphincters, and will have performed an invaluable service by preventing these chronic suppurating tracks. Agreeing with the old

maxim, I would say that prevention is the treatment of fistulae.

When fistula does result from this abscess formation there are several ways of bringing about a cure, which may be palliative or non-operative, and operative. However before any treatment is instituted the type of fistula to be dealt with must be determined. The diagnosis of fistula, as a rule, is easy, but it is often difficult to determine how extensive or how many subtracts lead from the main one, or whether it be complete or incomplete. The internal opening in the majority of cases will be found in the first one and one-half inches between the sphincters, and most often in the posterior commissure. Salmon's law is very helpful, and is as follows: A line drawn from one tuberosity to the other bisects the anus; if the external opening is in front of the bisecting line, and within a radius of one and one-half inches from the anal margin, the internal opening will be radially in from the external opening; but that if the external opening is without the radius of one and one-half inches or posterior to the bisecting line, then the internal opening will usually be in the posterior commissure.

For a simple fistula a flexible probe will be all that is necessary. But in the complex fistula, with many tortuous tracks, we must depend upon other means, for to overlook one track will defeat our operation. For tracing these I use bismuth paste or a saturated solution of methylene blue in hydrogen peroxide. The methylene blue solution is probably best, because the $H_2 O_2$ solution will readily find its way into all tracks and the methylene blue will stain the tissues and guide the operator.

Non-operative Treatment.—Caustics, as silver nitrate, irritants, as iodine and many others, have been used with an occasional success, and fistulae have been known to heal from the irritation caused by passing a probe, but such good fortune is seldom experienced. For an incomplete external fistula, opening the orifice so as to get good drainage together with curetting the track will frequently produce a cure, but such simple procedure is not successful in the complete variety.

I have had a few to heal by injecting bismuth paste, and I think it wise to try the

paste, as it does no harm and in selected cases will often times be successful, especially in the blind external variety and in the complete where the internal opening is not large and is not situated so as to be a direct route for feces and gases to enter.

Elastic ligature is used by some, but such a procedure does not appeal to me. However, if the internal opening is above the internal sphincter, or the patient an hemophiliac it might be used to an advantage, also in bad surgical risk that cannot be done under local anesthesia. Of course it cannot be used except in the simple variety with one track.

Operative Treatment.—There have been numerous operations done, but I will only mention those that are in common use and that I consider best, which are—incision, excision, excision with immediate suture, and the Elting operation. Excepting in very fat patients I use sacral anesthesia, so the poor surgical risks are all the same, unless they should have the misfortune of being fat or the sacral hiatus ossified. All rectal cases should be prepared as are abdominal cases, purgative should be given at least two days before the operation, two enemata the day before and one at least four hours before time set for operation, and no food allowed except liquids after the purgative. The parts should be shaved and scrubbed the night before and a sterile pad applied. When the patient is on the table and anesthetised the buttocks and anus are painted with tincture of iodine, the sphincter dilated if desired and the bowel mopped dry and then mopped with alcohol, dried and painted with 3 per cent tincture iodine, the external parts being painted with the same solution. Now the bowel is packed with sterile gauze well above the operative field and gloves changed before proceeding with the operation, so if the excision operation with suture can be done one has a fairly sterile field. At least two days before operation, and a week is better, inject 1 to 40 phenol or 1 to 500 bichloride solution into the track twice daily, and at operation tincture of iodine is injected.

Incision Operation.—The patient prepared and in position, the track should be injected with bismuth paste or the methylene blue so-

lution in order that it may be more easily traced, as what has all indications of being a simple case may be very tedious and have many tortuous tracks. Injection completed, a small flexible probe is gently inserted through the track into internal opening, if complete, and track incised on probe to the sphincter, when special care is taken to incise it at right angles. Say we find only one track, this is curetted and cauterized with pure phenol and neutralized with alcohol; now the mucous membrane forming the upper boundary of the internal opening is incised through the scar tissue to insure healthy granulations. Allingham was the first to do this and cured cases by this simple procedure where others failed. The hemorrhage controlled, the wound is packed with sterile gauze which is allowed to remain for forty-eight hours when it is removed and the wound irrigated with normal saline solution or 1 to 4,000 bichloride of mercury, dried, and gently packed not quite to the inner margin of the bowel with gauze and 25 per cent ichthyol or equal parts balsam Peru and castor oil. A purgative is given on the second night and the wound dressed once daily after evacuation of the bowels and stimulated by iodine or silver nitrate solution, 20 grains to the ounce every other day, if necessary. Great care should be taken not to pack the wound tight and occasionally the finger should be inserted inside the rectum to be sure that no unhealthy granulations appear. The patient should remain in bed one week and thereafter report at office each day until well.

Excision With or Without Suture.—This operation is usually applied to cases with only one track, but may be applied to one complete track with one or two short branches. Suture should never be attempted unless the track has been treated with the solutions of phenol or bichloride mentioned above. Operative field sterilized, a probe is inserted through the track and bent so that both ends meet in order that it may be used as a retractor. If the track is accidentally incised make no attempt at suture, as you have infected your wound. The track must be incised in toto if suture is to be used, using deep stitches in order to obtain accurate approximation, as dead space filled with blood and

serum is a fine culture medium. The wound should be carefully watched and the moment it shows signs of infection remove the stitches and you have not lost any time. When we do succeed in getting primary union it saves the patient much time and a stronger sphincter is obtained. In suitable cases I unhesitatingly recommend immediate suture. In tubercular patients, if at all advisable, suture should be tried.

Elting Operation.—This operation is based upon the Whitehead principle and can be used in any complete fistula without acute pus formation. Incision is made around the anus at the mucocutaneous junction and the mucous membrane dissected up high enough to allow it to be brought down and sutured to the skin margin after the mucous membrane containing the internal opening has been excised. The external opening is incised in order to obtain free drainage and the tract curetted. The complete fistula is now converted into an incomplete, the atrium of infection closed and with proper care the external tract will heal. Of course this operation depends upon primary union for results, but in my experience this is not a difficult matter, provided the proper treatment is carried out and the cases selected. It certainly will be a great step forward when we can cure fistulae without mutilating the sphincters and thereby avoid any probability of incontinence. The Elting operation appeals to me in many ways, but I have not used it enough to express a final opinion. Elting reports 105 cases operated on by this method, with good results in all.

We must remember that it is not merely the cure of the fistula which is desired, but in addition the patient should be left with a rectum as nearly normal in function as possible, and if we would give these cases the attention and time they deserve much better results would be obtained. What I have said applies in a general way to non-tubercular fistulae, therefore I cannot close without a few remarks about the tubercular type. I believe most all tubercular fistulae are secondary to some other focus in the body, and that focus to be most commonly in the lungs. I have seen cases where no focus could be demonstrated, and therefore called primary. Judg-

ing from various reports and my experience these cases are rare, certainly not more than one or two per cent. The great number of fistulae thought to be tubercular have not been confirmed by finding the bacilli. We should always examine the scrapings from the track, if there is any doubt whatsoever, and this examination should be made in all cases, as the bacilli are often found when least expected. No patient with fistula in ano should be subjected to operation without a good physical examination, paying special attention to the lungs, as probably 10 per cent of all fistulae are tuberculous, and mostly secondary. Elting reports 105 cases of fistulae and in all of these careful histological examinations of the tissue removed was made. Of this number ninety-six were found to be histologically non-tuberculous and nine histologically tuberculous. Of the nine tuberculous cases, seven had demonstrable pulmonary tuberculosis at the time of operation, leaving two cases without demonstration of foci. It is well to remember that fistulae in tubercular patients are not always tubercular, and that occasionally tuberculosis may be found when least expected. I recently operated for fistula on a man weighing 250 pounds, with a negative family history and no demonstrable focus, that was found to be tuberculous on histological examination.

The lowered resisting power of tubercular patients predisposes to infection of all kinds, hence abscesses are more likely to form about the anal region, and when improperly drained with their slow tendency to heal, form good culture tubes for the tubercle bacilli. Some have said the appearance of the tubercular fistulae is readily recognized. It may be or it may not be. The large, excavated external opening with livid undermining edges; the thin milky discharges; the absence of tenderness and the induration that one would expect, are all good signs, as is the large ragged internal opening, and this type of fistula in an emaciated tubercular patient will offer little confusion, as the bacilli will usually be found when looked for. But the idea that tubercular fistulae present these classical symptoms is what I want to correct, for they do not. It is well to remember that a tubercular fistula may look like a simple one, and

the only way to tell is to use the microscope.

Treatment.—All palliative measures, such as bismuth paste, tonics, etc., should be tried before operation is resorted to. I would not hesitate to operate on a tubercular patient for fistula under local anesthesia, unless the patient was in the last stages of pulmonary tuberculosis. It has been thought when the fistula healed the pulmonary condition grew worse; certainly this idea has been disproven, and we know the correct operative procedure will benefit the patient. However if one follows the same operative procedure as is ordinarily carried out in non-tuberculous fistulae, he may do great harm and shorten the patient's life considerably. But if the operator will remember that the best results are gotten by the least surgery possible, and the cutting done with a cautery knife, the induration or nature's wall of defense left intact, good results will be gotten. The Elting operation and the excision with suture in cases properly prepared will give good results. A very important thing with these cases is to get them out of bed, in the open air and sunshine with general reconstructive treatment. In other words treat the pulmonary condition and the low vital state of the patient, rather than the wound so recently made. Of course the wound must have proper treatment, but let it be secondary to other conditions present, and the general welfare of the patient.

EUGENICS AND MARRIAGE.*

A Treatise Upon An Important Phase of Social Hygiene.

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(Concluded from September Issue.)

"The maimed gray-beards who learned the 'wild oats' lie from society's primer are usually willing to confess that the 'wild oats' of yesterday are watered with the tears of today. The vicious roots of the 'wild oats' of youth often lie deep in the ashes of manhood's

and womanhood's despair. The crop is garnered with the sickle of regret and threshed with the flail of disease and pain."

All men and women should bury deep in the innermost recesses of their hearts that beautiful bit of verse, "My Creed," by Howard Arnold Walter, and recall it to memory when they are about to do something that will reflect discredit on their actions.

"I would be pure, for there are those that trust me;

I would be true, for there are those that care;
I would be strong, for there is much to suffer;

I would be brave, for there is much to dare;
I would be friend of all—the foe—the friendless;

I would be forgiving and forget the gift;
I would be humble for I know my weakness;

I would look up—and laugh—and love—and lift."

It is an unfortunate fact that there are many men whose chief claim to distinction is that they have debauched innocent girls. There is a many a girl, who, but for such creatures, would never have indulged in liquor given with fell design by one of these perverts—which caused her to lose her self-control and yield up her priceless chastity, thereby becoming an outcast from society and a shameless creature of the brothel.

Woman should demand the same pure life on the part of her lover that he demands of her. The moment she finds that he does not measure up to this standard she should shun his society as though he were an adder about to spring upon her; for, more fearful than the adder, whose poison kills at once, he is capable of infecting her with a disease germ so subtle in its action that it does not produce immediate death but long and untold suffering.

The man who can boast of a clean life, and of the fact that he has never violated the laws of chastity, and who goes to the woman he marries as pure and undefiled as she, wears the priceless jewel of true manhood.

We are learning every day more about ourselves than ever we knew before. We have learned that the gratification of sexual desire is not necessary to health, and that man may refrain from the performance of the sexual act until after he is married, without in any

way injuring his virility or strength in after years.

A very interesting example of man's ability to remain continent is spoken of in "The Truth About Woman," by C. Gasquoine Hartley. The writer in speaking of the marriage laws of the Wyandotte Indians tells of the lover "being permitted to share the jacal and sleeping robe, provided for the prospective matron by her kinswomen, not as a privileged spouse, but merely as a protective companion for one year; and throughout this probationary term he is compelled to maintain continence—he must display the most indubitable proof of moral force. At the close of the year, if all goes well, the probation ends in a feast provided by the lover, who now becomes husband, and finally enters his wife's jacal as 'consort guest.'" The Wyandottes are noted for their great strength and have never suffered from the seemingly harsh requirements of their marriage laws.

The procreative organs are very delicate and should be guarded very carefully in order that perfection of development and function may be attained.

The best way to obtain purity of body and cleanliness of mind is by proper education. It is absolutely necessary to educate the young in matters pertaining to sex if they are expected to climb the heights of the highest civilization attainable.

The proper sex education of youth will bring joy and happiness to them in their future lives. Children should be educated to understand that indulgence in the sexual relation before marriage may forever bar them from decent society and the chance of marriage. The "home" should be a school wherein the lessons of life are so clearly taught the young that when they are sent out into the world to battle for themselves it will be far easier to withstand temptation than it would have been had they not been the recipients of such liberal education.

It has seemed to me that we are not as yet ready for instruction in "Sex Hygiene" in the schools. My reasons for the above statement I hope to make clear.

1st. Almost all parents are ignorant along sex lines and ought to be educated in sex

hygiene before it is taught in the schools, so that they will be able to think and talk intelligently when discussing the subject with their children.

2nd. The majority of teachers of sex hygiene at the present time have a perverted idea as to what is meant by the terms Sex Hygiene and Personal Purity. Usually the first thing that is done by them in their lectures is to put the cart before the horse, and discuss effects before even attempting to analyze and define causes. They make it a practice to discuss pathological conditions and matters belonging to a study of the abnormal, instead of giving wholesome instruction which will have to do with only the normal.

Instructors in sex hygiene often are men and women who habitually deal chiefly with diseased minds and bodies. Again, these persons are likely to have an exaggerated notion of the necessity of teaching sex pathology to the young. Many of these teachers are specialists in treating what Lydston has called "diseases of society," or are workers in the slum districts where social conditions and human beings are at their lowest ebb.

A special endeavor should be made to obtain teachers who possess humanitarian ideas, and who for at least a part of the time are associated with and studying normal conditions.

Havelock Ellis in his book, "The Task of Social Hygiene," has this to say regarding the teaching of sex hygiene in schools:

"Sexual hygiene in the full sense—in so far as it concerns individual action and not the regulative or legislative action of communities—is the art of imparting such knowledge as is needed at successive stages by the child, the youth and maiden, the young man and woman, in order to enable them to deal rightly, and so far as possible without injury either to themselves or to others, with all those sexual events to which every one is naturally liable. To fulfill his functions adequately the master in the art of teaching sexual hygiene must answer to three requirements: (1) he must have a sufficing knowledge of the facts of sexual psychology, sexual physiology and sexual pathology, knowledge which, in many important respects, hardly existed at

all until recently, and is only now beginning to become generally accessible; (2) he must have a wise and broad moral outlook, with a sane idealism which refrains from demanding impossibilities, and resolutely thrusts aside not only the vulgar platitudes of worldliness, but the equally mischievous platitudes of an outworn and insincere asceticism, for the wise sexual hygienist knows, with Pascal, that 'he who tries to be an angel becomes a beast,' and is less anxious to make his pupils ineffective angels than effective men and women, content to say with Browning, 'I may put forth angels' pinions, once unmanned, but not before;' (3) in addition to sound knowledge and a wise moral outlook, the sexual hygienist must possess, finally, a genuine sympathy with the young, an insight into their sensitive shyness, a comprehension of their personal difficulties, and the skill to speak to them simply, frankly and humanly."

And he further says:

"It is useless to attempt to introduce sexual hygiene as a subject apart, and in some respects it may be dangerous. When we touch sex we are touching sensitive fibres, which thrill through the whole of our social organism, just as the touch of love thrills through the whole of the bodily organism. Any vital reform here, any true introduction of sexual hygiene to replace our traditional policy of confused silence, affects the whole of life or it affects nothing. It will modify our social conventions, enter our family life, transform our moral outlook, perhaps re-inspire our religion and our philosophy.

"That conclusion need by no means render us pessimistic concerning the future of sexual hygiene, nor unduly anxious to cling to the policy of the past. But it may induce us to be content to move slowly, to prepare our movements wisely and firmly and not to expect too much at the outset."

Rosenau says: "Education in sex hygiene and the venereal peril accomplishes a certain amount of good. It may be questioned how much a knowledge of the consequences will prevent some persons committing crime. However, the old-style innocence must be regarded as present-day ignorance. Every boy and girl, before reaching the age of puberty,

should have a knowledge of sex, and every man and woman before the marriageable age should be informed on the subject of reproduction and the dangers of venereal diseases. Superficial information is not true education. On the other hand, it is a mistake to dwell unduly upon the subject, for in many instances the imagination and passion of youth are inflamed by simply calling attention to the subject."

CHAPTER III.

It is a most lamentable fact that even today, in the majority of states, a lewd, diseaseridden profligate, showing in his every expression just what he is, may go to any County Court Clerk and obtain a marriage license to marry a woman who is not only pure, but strong and healthy as well, and whose normality should not be sacrificed on Hymen's altar.

There are no questions asked, and even if the clerk who issues the license knows perfectly well the character of the man with whom he is dealing, he, on account of our present laws, is powerless to act, and must issue a license, knowing that the prospective marriage will cause great suffering, perhaps untold agony, in the woman for years and years, even until she is finally relieved by the kind hand of death.

What can be expected of laws that compel a man to grant a license to a creature like the one just described? Should we wonder that degeneracy and its evil brood exist—that women and children suffer as the result of them?

These laws are made by men who are totally incapable of sound reasoning, being merely the tools of designing politicians, who are interested only in their own behalf, caring nothing for the future welfare of the nation.

Breeders of cattle and horses, and floriculturists and practical farmers, are continually devising means of improving both animal and vegetable forms, and occupy hours of time in explaining their methods; yet, when asked to vote for a change that will benefit the entire social system which they profess to represent, they turn away and refuse to listen. If they reply at all, they say that what

was good enough for their mothers and fathers is good enough for them. They forget that, instead of standing still, the world is progressing, and that as time advances ancient methods and traditions will be relegated to the dead lumber room of the past, in order that space may be made for improvements which must come as a natural result of progressiveness.

The day is fast approaching when legislation will in every state enact marriage laws which will be strict and will have to be obeyed to their very letter. Before a marriage license is issued both applicants will have to produce certificates of health, signed by an official board composed of reputable physicians, stating that the parties to the proposed marriage are physically and mentally fit to marry and procreate healthy children, and that neither the man nor the woman ever has contracted a venereal disease. The applicant who has had venereal trouble will have to submit to a second thorough examination by a medical board and be declared completely cured before the license will be granted.

When the marriage service may be read by any licensed minister, justice of the peace, or other official of the law, there is bound to be displayed a certain degree of laxity and indifference. This is dangerous, for many men and women have lived to rue the day they ever saw each other, as the result of hasty marriages.

The old method of publishing the "bans" should be brought into use again and laws passed that would enforce their publication.

If the law enforced a delay, many persons, after due deliberation, would refuse to take the step that ought to mean so much to them.

Marriages often are contracted merely because animal passion is allowed to predominate over sane judgment. When sex emotion enters the door character study flies out of the window. When passion cools it is too late to correct mistakes in mating. Such marriages could not take place under laws requiring a reasonable period of deliberation; such laws would give both the man and the woman a chance to investigate each other and acquire a knowledge of each other's character. This would frequently induce them to refrain from

an alliance that would prove harmful to one or the other, and in the end to both.

Man one day will be swayed by morals and calm reasoning intellect, instead of by instinct. The coming of that day will mark a period the like of which never has been seen in history. Morality will prevail, and a complete rebuilding of the social structure will result. The position of the man who leads a pure life will be pre-eminently higher than that of him who is loose in his morals and leads a life of disgusting sensuality.

The right of the child to be well born cannot be gainsaid. How to conserve that right is one of the most serious problems the world is now facing. Eugenists and writers on Social Hygiene are devising ways and means to help, and are giving wholesome instructions to mothers and fathers as to how properly to care for themselves in order that their children may be born healthy and free from physical blemishes which lead to moral and mental degeneracy. Instruction is being so generally given that there can be no possible excuse for ignorance. Children are being taught the secrets of life and are being made to understand that the mysteries of the past regarding themselves are just the things they should know. Ignorance with regard to sex is being relegated to the ash-heap, along with other medieval hypocrisies.

The teachers of eugenics, as well as the teachers of Sex and Social Hygiene, in their fight for race improvement, have not overlooked the fact that in our midst are numerous antisocial classes which must be reckoned with. The hardened criminal, the moral degenerate, the mentally deficient, the hopelessly insane, the residents of the slums, who breed like rats and live in unavoidable squalor and poverty, the beggar class—and they are legion—the prostitute, the pimp, the inebriate, cocaine and morphine fiends, and not a few others that might be mentioned—these are antisocial beings in that they tend to drag our social standards down. Some means must be devised to prevent their marrying and bringing into the world beings like themselves. If we wish to be rid of all that has a tendency to produce anything that will stop progression and the upbuilding of the race, it will

be found necessary to resort to radical measures.

I suggest the operation of vasectomy—sterilization—as a means of improving future generations by destroying the procreative ability of the unfit, who, by marrying and bringing into the world beings like themselves, are doing mankind a great injustice.

This operation will not in any way interfere with marriage, except that the man and woman will not be able to reproduce the species. They will be able to enjoy the marriage relation and live together as man and wife without feeling that they are a menace to civilization. They will know that when they die their race, so far as they are concerned, dies with them. It will be by the process of elimination, and by it alone, that the race improvement we are hoping for will come, and sterilization is the most humane method of its accomplishment.

The vasectomy operation is harmless. It does not imply castration, and involves no real mutilation and no loss of sex power other than that of procreation.

There is a class of people who unconsciously are a cause of degeneracy and frequently the cause of criminality by arguing to their children when they show a desire to advance and really amount to something in the world, that what was good enough for their fathers and mothers is good enough for them. This is a mistake, and one which should be rectified, for mankind must either progress or degenerate.

It must be seen that the men and the women who accomplish things in this age are those who have brushed aside traditions and climbed the mountains of difficulties and have overcome them. Only such individuals can be justly classed as desirable citizens.

I hold that every man or woman who belongs to the degenerate class, whether criminal, inebriate, beggar, pimp, prostitute, imbecile, moral leper, or pauper, should have their powers of procreation taken from them in order that in the future it may be truthfully said of children born into the world, "They came from strong and healthy families, and families composed of men and women

who have really done something for race improvement."

The states that have passed laws providing for the destruction of the procreative powers of criminals and degenerates have taken a long step forward in race progression.

The moment a race of people begins to study means and methods for self-improvement, that race or nation begins to ascend to a plane of civilization that never can be attained by a people which pays no attention to anything but the struggle for the Almighty Dollar and what it brings.

The Spartans, through a process of elimination, developed a race of perfect men and women—perfect not only in body, but in mental attainments. They destroyed, by throwing them over the cliffs, all of their race who were imperfect mentally or physically.

It will not be found necessary to throw the imperfect of the race over cliffs and by so doing bring about a violent death; but it will be necessary to see that their kind dies with them. The way to accomplish this, as has been said before, is by destroying their procreative ability.

Every effort is being made to improve animal life and produce fancy stock that will bring higher prices. Human beings should demand that the race to which they belong be improved. If fancy breeding and the care which animals receive improves them, it is certainly logical to treat the human race in like manner and bring it up to a similar standard of perfection.

The Rev. Henry Stiles Bradley in an address before the Southern Sociological Congress at Atlanta, Ga., in 1913, gave some startling statistics about insane and mentally deficient beings who are being taken care of in institutions throughout the United States. He says:

"We have been, and are still, trying to drive the human race uphill with the brakes on. Of all the drags upon the human race today, the heaviest are war and bad germ plasm—the reproduction of the unfit. I shall call attention to a few facts relating to reproduction of bad germ plasm.

"First, I would have you note that the burden upon civilization due to bad breeding is increasing. From 1890 to 1910 the insane per-

sons in the asylums of the United States increased from 74,000 to 250,000, the number of criminals increased from 82,000 to 115,000, juvenile delinquents increased from 15,000 to 23,000, paupers increased from 73,000 to 85,000, eleemosynary patients increased from 112,000 to 250,000, institutions for the insane increased from 162 to 372.

"Four per cent of our population belong to this class of insane, idiots, feeble-minded, etc., and the care of them is one of our heaviest economic burdens. We are spending every year in the United States \$30,000,000 for the maintenance of hospitals and such institutions for the care of these dependents. We spend \$20,000,000 for insane asylums, \$20,000,000 for almshouses, \$13,000,000 for prisons, \$5,000,000 for the feeble-minded, deaf, and blind. The 723,000 persons of this class cost us yearly nearly \$100,000,000."

These statistics, combined with the statistics of criminal institutions, certainly warrant my assertion that the operation of vasectomy should be performed on mental and moral degenerates, both in and out of institutions. Out from under institutional care the mentally and morally deficient become the greatest menace to race progression.

* * *

To sum up what has been said, there should be a perfect knowledge of the ethics of sex; for from lack of knowledge damage usually results.

Hasty marriage should be forbidden by law. All engagements should be made known at least four weeks before the wedding occurs, and the law along these lines should be very strict. In my opinion, the way to defeat the divorce evil is through the perfection of laws which will not regulate the issuance of divorce decrees, but will regulate the wholesale and promiscuous issuing of marriage licenses, which is going on today, and prevent, under penalty of fine or imprisonment, a marriage taking place until both contracting parties have been fully investigated, and their moral, mental and physical condition looked into.

Too long has society been worshipping at the shrine of tradition by allowing marriage laws to stand, that, while considered good in

days gone by, are at the present time vicious and should not be tolerated by progressive men and women.

Too long has society tolerated some of the so-called love matches, which are merely exaggerated infatuations, mixed with more than an ordinary amount of animal desire. The head and the heart are too frequently separated and usually no attention is paid by those wishing to marry to advice or common sense. Too long have mothers been tolerant of the attention of moral lepers to their daughters, because of a fear that the daughters would not be a success in society. Frequently the debauchee is able to disguise himself as a clean man, and, because he happens to belong to one of the first families of the town and occupies a high social position, he is allowed to associate with girls and young men who are pure and clean-minded, only to taint them by his presence because of the foul life he is living.

The future generations that are yet unborn are deserving of more forethought, and that their welfare be better looked after. It is the proud boast of the American people that they are the strongest in the world. If the laxity of our present marriage laws is allowed to continue to exist, what may be expected of the human beings who are to be the fathers and mothers of races to come? Will they not be weaklings and fall, because they are weaklings, and become the vassals of a race of people who believe in their own strength and who have in the days that have passed preserved their forces in order that they might become strong and leave a heritage of power to their future progeny?

Until the laws are made that will look to the improvement of the race, and the regulation of marriage, divorce mills will continue to grind and no one will be able to stop them.

The words of Old Adam in "As You Like It" are here most fitting:

"Though I look old, yet I am strong and lusty;
For in my youth I never did apply
Hot and rebellious liquors in my blood,
Nor did not, with unbashful forehead, woo
The means of weakness and debility.
Therefore my age is as a lusty winter,
Frosty but kindly."

1190 Linden Ave., Memphis, Tenn.

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OF THE

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EDITORIALS**FOUND IN A BUSINESS MEN'S PAPER.**

There has come to the Journal a paper called the *Williamson County Progress* and in it we have found the following article. We think it indicates how intelligent business men are coming to regard patent medicines.

OUR GREATEST WASTE.

Without doubt the greatest as well as the most useless waste of good, hard-earned, much needed dollars in Williamson County is in the purchase of patent medicines.

The dollars thus spent are worse than wasted, because these nostrums are not only merely useless, but the great majority of them are positively harmful, in that they contain habit-forming drugs, the continued use of which is dangerous and hurtful.

The greatest, as well as the most inexcusable evil, allowed by the law in Tennessee today is the "Commercial exploitation of the sick for the sake of pecuniary gain," and the most conscienceless villain allowed to run at large is the man whose tainted dollars are fraudulently obtained by playing upon the suffering, the fears and the ignorance of the hopelessly sick.

The highway robber as he holds up his victim, runs some risk that he will be shot, and exhibits some degree of courage; the thief, who pilfers a loaf of bread, has the excuse of being hungry; the ghoul who slinks across the battle field emptying the pockets of the wounded and the dead, at least does his victims no additional harm.

But what can be said for the man who in order to succeed in his scheme must add deception and fraud to his other crime of robbery, adds to the ailment which he proposes to cure, and whose chief victims are the most helpless classes of society, namely: the ignorant, the poor, the sick and afflicted, and, especially, weak and sickly women and children.

It is apparent that it is the sickly women who are considered the easiest prey of these fakirs, for it is towards them is chiefly directed the plausible and false advertisements and it is their ailments which are most prominently and indecently paraded therein. It will perhaps surprise some

other wise, pious and intelligent women to learn that they have been induced to habitually take "booze" in the form of patent medicines and that they have lent their name and influence towards promoting the sale of a disguised tippie; but such is a fact.

Who are the accessories to the crime?

First. The newspapers whose publishers are doubtless well paid for their space and influence and whose columns are filled with statements which the publisher (if he is a man of intelligence) knows to be untrue, but who is willing for the filthy lucre to thus impose upon his trusting subscribers.

Second. The druggists who allow flaming and deceptive posters to be stuck in their windows and who recommend and sell these nostrums to their friends and customers, reaping a larger profit thereon than they do from the sale of standard and legitimate drugs.

Third. Legislators, who having been honored by their fellow citizens, with positions of honor and trust, are influenced in their votes by the representations of the paid attorneys of the patent medicine trust, more than by the interest of their trusting constituents at home.

During the past few months a certain patent medicine concern has been advertising extensively in this county (as well as throughout Tennessee) and has doubtless relieved the people of the county of many hundreds of dollars.

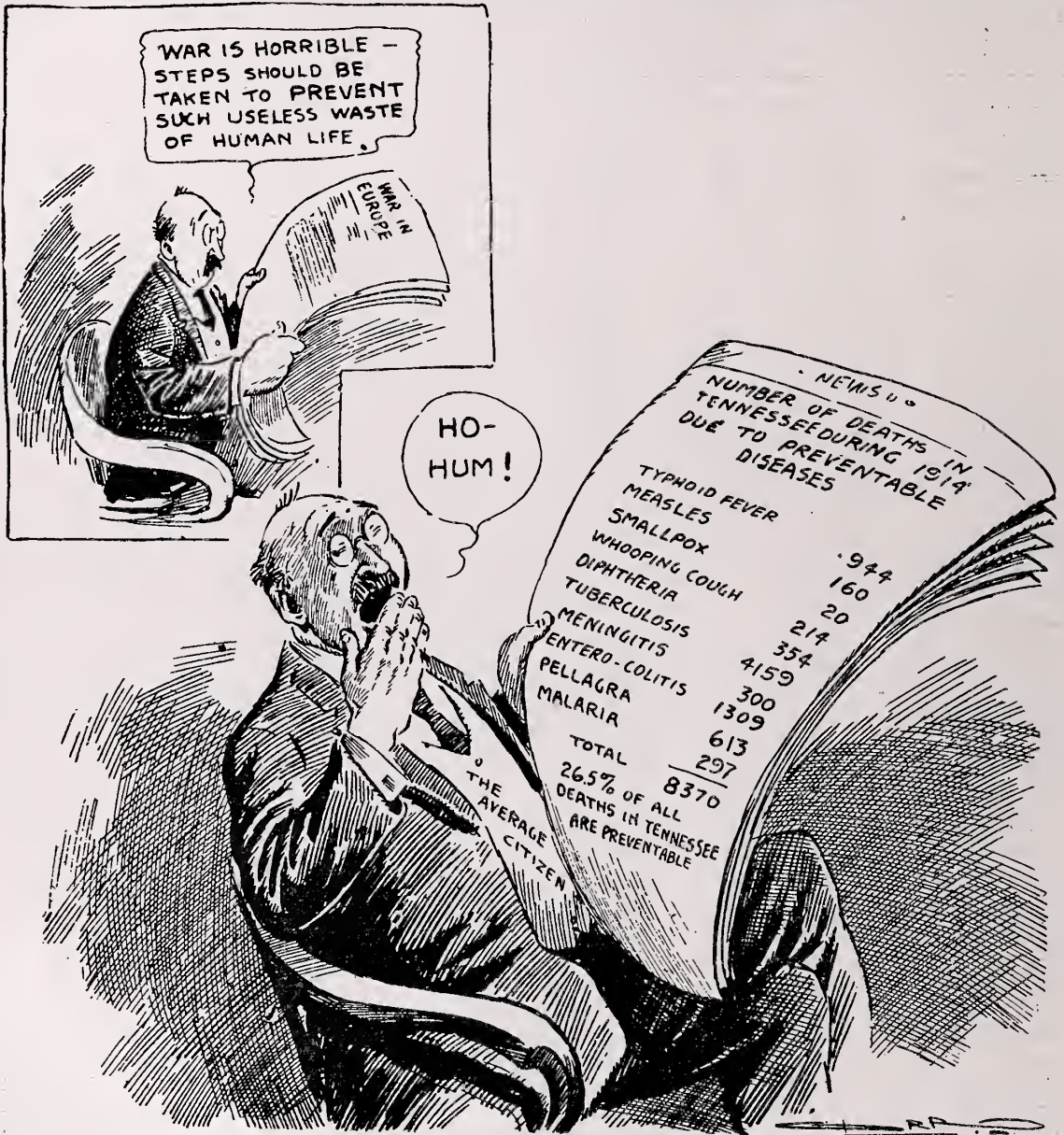
It is interesting to compare the labels on the bottles of this and like concerns before the Pure Food and Drug Law made "lying expensive, instead of merely immoral," with the labels since. For instance, "A purely vegetable non-alcoholic compound" before; "contains 30 per cent alcohol" after; "will cure all lung diseases" before; "recommended for all lung diseases" after.

The newspapers of Lexington, Ky., record the arrest in October, 1914, of the manufacturer of the nostrum referred to above, on account of his fraudulent method of exploiting his product, and the further fact that several indictments were returned against him, to one of which he pleaded guilty, the others being filed.

How long will public sentiment in Tennessee allow our State to remain under the domination of this evil and to lag behind other States in the enactment of wholesome and intelligent laws to suppress it?

That's the way the *business men* in Williamson County feel about it. What shall we say about *doctors* in another of our counties who were bold to propose a vote of confidence by their County Society in the biggest of all the patent medicine purveyors?

USELESS WASTE OF HUMAN LIFE



Carey Orr in Nashville Tennessean and American.

A TRUTH-TELLING PICTURE.

The accompanying cartoon is reproduced from the Nashville Tennessean and American of September 17th. This picture is by the brilliant and accomplished cartoonist, Mr. Carey Orr, and is one of the best of all his many excellent productions. It needs no explanation, setting out as it does in a most striking way one of the biggest reasons for Tennessee's present death rate from diseases which are largely preventable. The picture

carries a shaft of convincing and convicting truth. It will surely help in the fight for health.

The Journal desires to commend Mr. Orr for thus using his wonderful gifts to bring to the attention of the reading public the important fact that a tremendous sacrifice of human life is being made in Tennessee—largely because of the indifference of this same public. We hope the artist will make further effort along the same line, assuring

him that he will win commendation and gratitude from all who know the facts pertaining to the waste of life in our own state where missiles of war play no part, but where communicable and preventable disease are the agents responsible for unnecessary slaughter.

THE STATE BOARD OF HEALTH AND RURAL SANITATION.

The Tennessee State Board of Health has instituted a new plan of field work in rural communities which bids fair to produce definite results in the matter of the prevention of communicable disease. The whole state has been more or less thoroughly covered in the educational campaign conducted in connection with the work of the Rockefeller Sanitary Commission for the eradication of hookworm disease, and the Board believes that the time has come for instituting more intensive methods. Through the co-operation of the International Health Commission it has become possible for the State Board of Health to offer "community campaigns" to any county in the state which will furnish, as its contribution toward defraying necessary expense, the comparatively insignificant sum of \$300.

The plan briefly outlined is as follows: Three strictly rural communities comprising 125 or 130 families are selected in a county co-operating, and a health survey is undertaken in each of these communities. After it has been ascertained what conditions are, an effort is to be made to complete a thorough clean up campaign in each of the three communities. Lectures on health subjects will be given in schools and before popular audiences, assistance will be given toward building an improved type of privy for every home and every school in each of the three communities, the importance of screening against flies and mosquitoes will be urged, the proper safeguarding of water and food supplies will be insisted upon, literature dealing with disease prevention will be distributed, and, in short, whatever can be done toward making these communities more safe against preventable disease will be done.

This work of the State Board of Health is under the direction of Dr. Olin West, State Director of Rural Sanitation, and his associates, Drs. T. B. Yancey, Jr., W. P. Robinson,

and W. S. Rude. A local assistant is employed in each community. Campaigns are now under way in Chester and Wilson counties and results are being accomplished which are most gratifying. It is believed that a well sanitated community in any county will serve as an example to stimulate others to better sanitation.

These "community campaigns" will be undertaken in any county which will appropriate \$300 to be used in helping to defray necessary expense. It is hoped that at least twelve counties in the state will co-operate during the year with the State Board of Health in this new effort to conserve rural health.

WHAT IS THE REMEDY?

We hear a deal about the trials of the country doctor. The expression generally has reference to certain physical difficulties that hamper his movements for attendance upon the sick. The long rides, often at night, and the poor roads are very real difficulties. Add to this the hope of small or no remuneration, the lack of nursing facilities, lack of means to secure comforts necessary for the sick, and the indifference of the patient or family to medical advice, and is it any wonder that discouragement and her hand-maiden, indifference, get firm hold on many country doctors? It is to us indeed rather a matter of surprise, but also one of intense gratification that so large a proportion realize their obligation to the public and never falter in their devotion. But there is another trial to which the rural physician is subjected that has a very material bearing on his comfort and his professional evolution. We refer to the fact that he may have a brother practitioner that is a brother only in a professional sense, whose conception of the practice of medicine is to "let him take who has the power and let him keep who can." We have known young men from college already imbued with the idea that they are "out for business;" that it is none of their affair to look after any one's interest—that "what comes my way is mine," etc. It is only a short step and one easily taken and, we may say constantly taken by men of this type, to adopting means of securing patients that are not honorable. In too many communities we hear of men that according to common report will not do "the square

thing." Often, no doubt, such report is based on inaccurate information and if all the facts were known the suspected one would come clear. But too often these things are true, and wherever we can trace the footsteps of the "unfair competitor" we find that somebody has his reputation damaged—somebody has had a quiet thrust at his character that abides.

On asking a physician not long since why he did not attend the medical societies, he boldly said he was afraid to leave his practice in the hands of his only neighbor doctor. Does such a state exist in many localities in Tennessee? If so, it is a shame. The country doctor that labors under such handicap has something more galling and more embittering than bad roads and poor pay. He is a part of a situation that dwarfs his soul, begets a tendency to "retort in kind" and keeps the public in a state of disgust with the relations of medical men.

Many physicians in the country, and in towns, too, for that matter, would like to get away for a period of study and improvement, but fear that on their return their business would be gone. This is, no doubt, a fanciful fear, for such a trip would practically always be a benefit, but the excuse given shows a bad situation. What is the remedy? Well, we have no remedy to exploit just now, but if these remarks shall serve to prompt every reader to ask himself whether he has secured his patronage by strictly honorable means, whether his brother practitioner has any cause to shun his companionship—personal and professional—they will have done a real service.

KNOWN AND NOT KNOWN ABOUT OUR COUNTY SOCIETIES.

(Continued from September Journal.)

Davidson County members reported for 1915, 140; 1914, 157. Meetings held every Tuesday evening; average attendance, 35. Yearly program, no. Reports to Journal of regular meetings, yes. Number of physicians in county, about 300. Members from adjacent unorganized counties, none. Educational work, non regularly conducted. Members paid medical defense, all.

This is our home society. We love it. We know a whole lot about it, some of which per-

plexes mightily. For instance, there are seventeen less names on the roll now than were there last year. Very, very few of the physicians of Davidson County outside of the city of Nashville are members. The work of the society is done, year in and year out, by the same few men. The weekly meetings are attended by about one-fifth of the members, and one who goes frequently can come near to telling who will be on hand before a meeting is held. Many of the older and more prominent members come very frequently and exhibit little working interest. It seems to be impossible to secure material for a program, and so on, etc.

As for what we don't know about the Davidson County organization: We don't know why any physician in the county who can get in is willing to stay out. We cannot understand why quite a number of men who have held membership for some years have not paid 1915 dues. We are unable to explain the indifference which makes it impossible for a program to be constructed for the year and carried out. We don't know why so many of our best men positively neglect attendance upon weekly meetings. We are at a loss to explain why the Nashville Academy of Medicine and Davidson County Medical Society is not what it can be and should be—the best in the South.

Even though it fails in some respects, this society does some good work and is worth a great deal to the profession of Nashville. It has a fine history behind it and should have a fine future before it.

Dr. W. E. Hibbett is President, and Dr. J. F. Gallagher, Secretary.

Dickson County—Members reported for 1915, 10; 1914, 9. Registered at last annual meeting of State Association, 8. Distance from Nashville, 42 miles. Reports to Journal of regular meetings, none. Meetings held, monthly, at Dickson. Average attendance, don't know. Yearly program, don't know. Number of physicians in county, 20 (?). Members from adjacent unorganized counties, one. Members paid medical defense, 2. Educational work, none reported.

President, H. C. Guerin; Secretary, W. W. Walker. This society has only one more name enrolled than last year, but has two Dickson county men who were not members in 1914.

Two who reside in another county are now affiliated with their own county organization. No word has come from Dickson in a long time. We hope the society is prospering. There are three unorganized counties touching Dickson—a fine chance here for missionary work.

(To be continued.)

DR. M. F. CLEMMONS.

Dr. M. F. Clemmons, a valued member of the Wilson County Medical Society, died at his home at Baird's Mill on September 22, from typhoid fever.

Dr. Clemmons graduated from the Medical Department of Vanderbilt University in the class of 1887 and his life was full of useful service. Practically the whole of Dr. Clemmons' professional life was spent in Wilson County.

BOMBARDED—ASPHYXIATED—SUB-MARINED.

We know just how the long-legged Grand Duke of Russia has been feeling. In the first place, we ourselves are long-legged, the Grand Duke having slight advantage in that particular. In the second place, everything but one or two things that the Grand Duke has had happen to him in these last six months has happened to us since the September Journal came to light. We have been bombarded with 42-centimeter "Jack Johnsons," we have been asphyxiated with gases of varied hues, smells and compositions, we have been hit above and below the water line with torpedoes and floating mines—both after warning and without inquiry as to our nationality, neutrality, or excuse for existence—and we have been almost surrounded by hordes of seemingly frenzied and furious lancers, machine gun operators, bomb throwers and swordsmen. We almost have suspected the presence of spies! The aviators, men aloft, seemed not to feel hurt at us and aimed not a dart.

All because. That's the only reason we have been able to discover. If we can get 'em one at a time on the side they nearly all agree with us perfectly.

The only experiences the long-legged Grand

Duke has enjoyed—we say **enjoyed**—which have not been ours are deposal and retreat. We may be deposed before long, but even amid the bleak snow fields of the very edge of things we'll feel the same way about it. We will not retreat until the long, long legs on which we stood in September have been cut smack off at the very tip top. Thirty days of careful observation have brought no evident lines of severance.

The gas was bad, though—much, very much worse than shells or torpedoes. We have purchased respirators and await the next assault with fear and composure.

AGAIN—TO COUNTY SECRETARIES.

Four of you have not paid your own dues for 1915. Several of you have not sent in dues of members which have been paid to you, consequently these members are **not** members of the State Association because of your negligence.

Many of you have allowed many 1914 members to lapse. We have five and one-half pages of names, sent by the Secretary of the A. M. A., which were on the 1914 roll, but are not on this year.

If all the 1914 members were paid for 1915 we would right now have 340 more in the State Association than ever before.

Please, **please**, PLEASE get on the job and let's make **1915** the year.

News Notes and Comment

The fellow who prescribes without examining his patient is not a doctor—he's just nobody at all.

The doctor who prescribes without a diagnosis shoots in the dark. His patient gets hit and generally gets hurt.

How about cleaning up? The munition factories can use that old office stove of yours and your office will be much more comfortable and inviting with a new one.

Dr. O. S. Hauk, of Blountville, a member of the State Legislature from Sullivan County,

has been made State Revenue Agent for East Tennessee.

Dr. J. S. Trusler, representing the State Association and the A. M. A., is bringing new members into the fold.

Dr. J. Victor Henderson, of LaFollette, is in New York for a year's service in Bellvue Hospital. After completing his work in Bellvue, Dr. Henderson will return to Tennessee.

Dr. H. R. Townsend, who for three years has been engaged in public health work in Tennessee, is now serving as intern in Bellvue Hospital, New York.

Dr. J. M. Lee, of Nashville, is now at the Post Graduate Hospital in New York. Dr. Lee completed a year's service at Bellvue recently, and immediately accepted a place at the P. G.

Dr. E. W. Mabray, Secretary of the Jackson County Medical Society, is recovering from a severe attack of typhoid fever. Dr. Mabray's home is at Gainesboro.

Some fellow has said that it does no good to buck the world—she'll turn on in spite of you. He's right, but some of us just naturally can't help pestering certain zones.

Answer this and get a prize: Who started all this commercialism? A large assortment of surgical instruments will be awarded to the first internist who sends in the name of the guilty surgeon. To the first surgeon who sends in the correct name of the internist who was responsible for it will be given a nice case of pills and pellets and things.

This contest will be "judged" by the laboratory men and the eye, ear, nose and throat specialists, and the only condition attached is that the judges shall be allowed to select such instruments and medicines as they may require for their own use in daily work.

Correspondence

My Dear Mr. Editor:

I desire to enter a protest on your attitude with reference to the subject of middle ear abscesses and your implication that its treatment is a most simple and insignificant matter. I am not doing this in the interest of Dr. Specialist, for he, like all the guild, often needs the hammer—and it well laid on—but because, first, your implied supposition is on the wrong track, and, second, because the influence of such implication may be bad if allowed to go unchallenged and might result in permanent harm coming to somebody's child. I am, you see, supposing that the opinion of our able Secretary carries much weight with the readers of the Journal.

I shall here attempt, in my feeble way, to set you right and, also, with your valuable aid, reach very many of our general practitioners who even at this day are disposed to look upon a child's middle ear abscess as a very "simple" matter. I would have them look at the subject from the viewpoint of the specialist, who, if he has a thorough knowledge and grasp of this subject, considers middle ear abscess a very important disease and assumes responsibility in its treatment with a very grave regard for the many dire sequelae which may result from improper procedure. If I can get the interested attention of physicians who are disposed to minimize the importance of middle ear abscess—happily they are growing fewer—my writing will have been worth while.

In order to get at a better understanding of this trouble let us suppose, for argument's sake if you will, that there are three little ossicles or bones in the middle ear cavity intimately bound by the same kind of ligaments in synovial membrane as in other joints of the human body. This being true, are we to assume, if the drum cavity is attacked by germ of whatever nature, that these delicate little joints and bones will entirely escape? I trow not.

Let me suppose a case: Suppose a boy should suffer an arm fracture involving a joint and Dr. Surgeon should reduce the fracture with greatest care and precision and

with most beautiful cosmetic results, but should have neglected to employ passive motion and allowed the joint to become stiffened and motion impaired, and had then sent in his bill for \$50 or more. I am willing to lay you that I can guess the very first time what our genial Secretary would "suppose."

The ear specialist who lances a drum successfully and fails to cure the discharge by not having his patient come daily to his office for proper and necessary treatment when he collects his \$25 fee is just as reprehensible as Dr. Surgeon in the supposed case of the broken arm. No, Mr. Secretary, it is not the over-care the specialist gives these "simple" cases that hurts. It is the positive neglect by physicians in a vast majority of such cases that is responsible for the beginning of chronic middle ear catarrh, which insidiously but progressively leads on to deafness or near deafness that the ear specialist would prevent by preventing, as far as he can, the stiffening or ankylosis of those little joints.

Just here let me say that even much of the fault or neglect of which the specialist may be guilty is indirectly chargeable to the family physician in these cases. As you will see later, the attitude or opinion of the general practitioner who first sees these cases is reflected in the preconceived ideas of the parent. Usually little Johnnie is brought to Dr. Specialist with about this history: "Oh, yes! Our doctor examined Johnnie and said that as he does not treat ear conditions that I'd better bring him to you," or, "My doctor told me to get a syringe and wash out Johnnie's ear two or three times a day." From the mother's description, and she is generally very precise, the syringe ordered is usually a little "G. U." glass syringe and its length is indicated by mother's measuring on her hand. Mother has been using this little squirt gun occasionally, most probably for several months, and Johnnie does not get well. Mother decides, or the family physician very indifferently decides that Johnnie shall be taken to Dr. Specialist. Now, Mr. Secretary, you can, without half trying, realize just about how Dr. Specialist feels when he knows so well just what he is up against. He must first combat mother's erroneous belief, implanted in her mind by the attitude of her

family doctor, that Johnnie's trouble is very simple and unimportant. She knows that she so considers it—and why should she not? Certainly her doctor has her child's welfare at heart and he has exhibited no concern! Dr. Specialist explains the situation carefully, only to be met with a quizzical stare which may easily be interpreted to mean: "Dr. Specialist, are you a crook, or do you just need the money?"

If Johnnie is in the stage that has made his mother realize his true condition, Dr. Specialist does not have to use any argument to induce her to bring the little fellow for daily treatment for weeks or months, even though Dr. Specialist holds out little hope. Then comes the time when Dr. Specialist surrenders—but mother does not. She takes Johnnie on a long round of visitations to all the Drs. Specialist and then—in a last effort, she turns to the advertising charlatans. After a spell, Johnnie comes to man's estate deaf or near-deaf with his earning capacity much lessened. Some friend of his has a friend who uses an "ear drum" and Johnnie, with his small earning capacity, begins to spend his money in making a collection of artificial ear drums, for that's what it really means. None of them are helpful, but he buys them all one at a time. Strange to say, Johnnie soon or later falls into the hands of these nefarious sellers of worthless traps—no matter where they are located. The total sum of money he spends in amounts of five to twenty-five dollars would astonish you.

There is another class of little Johnnies, which though by no means small, is less numerous than that above described. I cannot better call your attention to this class than to say that statistics of all institutions for the deaf and dumb show that 50 per cent of all inmates have lost hearing for voice sounds before the age of six and that their deafness is the result of this "simple" condition—suppuration of the middle ear. Though many of these little fellows can be and are taught to say many words, they become dumb after they have lost hearing for the spoken voice.

Other sequellae of middle ear troubles as mastoiditis, brain abscess, meningitis, etc., could be here gone into, but I do not feel that it is necessary for my purpose.

Don't condemn Dr. Specialist for having these cases repair to his office for daily treatment any more than you would condemn Dr. Internist who makes daily calls upon typhoid or pneumonia patients, counts the pulse, looks at the chart and goes his way, not forgetting to note the visit for ledger entry. This man if worthy of his high calling is worthy his hire. Equally worthy is Dr. Specialist if he does his plain duty by little Johnnie and entitled, too, to his \$25 or even more.

It is not altogether improbable that Dr. Specialist sometimes fails to do his full duty by little Johnnie rather than lay himself liable to the suspicion upon the part of others that he is a money grabber.

And finally, Mr. Secretary, let me express the hope that my "piece" will not be in vain. Take it from me, when that day comes when the general practitioner as conscientiously and intelligently treats middle ear troubles as he does typhoid, then will we see far less of the unfortunate results of careless and unintelligent treatment which, now we so frequently see even among our individual friends and acquaintances.

In conclusion, let me bespeak from you and through the Journal the proper consideration for this important and not "simple" disease—middle ear suppuration. I would urge the general practitioner to go over these cases fully with the family heads before sending them to the specialist. Then Dr. Specialist, poor devil, will not so often have cause to feel "What's the use?" His work will be of more avail and his fees even better merited than now.

With kindest regards for you and with best wishes for the good work of the Journal, I remain,

Yours fraternally,

JAMES P. CRAWFORD.

(We are greatly pleased to give place to Dr. Crawford's communication—so much so that we shall not take up any room in defending ourself against his erroneous understanding of our position as regards middle ear suppuration and also as regards the attitude of the ear specialist toward this condition. His views and ours are in harmony in practically every particular, and we earnestly hope that his letter will do something toward correcting the indifference of many doctors in their handling of cases of middle ear involvement.—Editor.)

Society Proceedings

HENDERSON COUNTY.

The Henderson County Medical Society met Tuesday, September 14, 1915, in the offices of Drs. Brandon and Parker with a good attendance present. The meeting was called to order by President, Dr. J. T. Keeton, of Sardis, and minutes of the previous meeting were read and approved.

Dr. R. L. Wylie led a discussion on "Malaria," followed by Drs. M. P. Boyd, W. B. Keeton, Johnston, Huntsman, J. T. Keeton and Parker.

Several cases were reported by Drs. Wylie, Johnston, Keeton, Boyd and Parker. Dr. Bolen was appointed to read a paper on "Typhoid Fever," and Dr. Huntsman on "Epithelioma" at the next meeting, which will be in October.

Present were: Drs. Boyd, Wylie, W. B. Keeton, J. T. Keeton, Bob Keeton, John Powers, Johnston, Huntsman, Bolen, Fesmire, and Parker.

There being no further business the Society adjourned.

SAMUEL C. PARKER, Sec'y.

BEDFORD COUNTY.

The Bedford County Medical Society met in regular session September 16, 1915, and was called to order by Vice-President S. S. Moody, with the following members present: Drs. Taylor, Spencer, Ray, Pyatt, Dyer, Horton, Landis, Avery, S. S. Moody, and Reagor. Dr. Morton came about adjournment time.

Dr. D. C. Haggard, the essayist for the afternoon, read a paper on the subject of "Typhoid Fever," which was well presented and discussed freely.

Dr. J. H. Dyer reported case of "Carcinoma of the Pancreas." Drs. Haggard and Ray reported case of what they guessed to be appendicitis, which was guessed by others to be, from the symptoms given, some condition of the upper abdomen. This was a very interesting case reported under mortuary reports and it would have been valuable in this case to have had a post mortem.

The committee was given further time to

report on Wm. Thomas, the man who is dealing in a cancer paste in our county.

Adjournment was taken till the next regular meeting in October.

F. B. REAGOR, Secretary.

THE SOUTHERN MEDICAL ASSOCIATION.

The 1915 session of the Southern Medical Association will begin at Dallas on November 8, and will conclude on the 11th. Notwithstanding the fact that Dallas is far removed from the eastern limits of the territory from which the members of this splendid Society are listed, a fine attendance is already insured for this year's meeting. The Southern is a forward-going organization with an interested membership and is doing a splendid work for doctors of the South.

Dr. Seale Harris, Secretary, Birmingham, Ala., will give full information about the meeting to all inquirers.

TRI-STATE MEDICAL ASSOCIATION.

The annual meeting of the Tri-State Medical Association will be held at the Gayoso Hotel, Memphis, November 16, 17, 18. Dr. J. L. Andrews, the Secretary of this very popular organization, is expecting a fine attendance from each of the states represented. There is generally "something going on" all the time on the floor of the Tri-State, and there's always a good time for the guests of Memphis doctors.

JEFFERSON COUNTY.

The Jefferson County Medical Society met at Dandridge in Dr. P. A. Tinsley's office at 12:30 p. m. Called to order by Dr. B. F. Brown, the President being absent. The Secretary being absent, Dr. M. N. Dukes was elected Secretary for this meeting.

Members present: Drs. Brown, Dukes, Tinsley, Tadlock, Roberts, French. Visitors: Drs. H. L. Campbell, Straw Plaines; Shields, Dandridge; Rainwater, Dandridge; J. S. Trusler, Nashville. Dr. J. S. Trusler secured as new members Dr. Profit, Chestnut Hill; W. H. Taylor, New Market; B. Rainwater, Dandridge; Helms, White Pine.

Had no clinics. Dr. J. S. Trusler gave a good talk and suggestion on how to improve the County Medical Society. Discussed by Drs. Dukes, Tadlock, Campbell, Roberts, Tinsley, and others.

The time of our meeting was changed from a quarterly meeting to a monthly meeting, alternately at Jefferson City and Dandridge. The next meeting will be at Jefferson City, the first Tuesday in October, the 5th of this month. All had a good time talking about medical subjects in general.

Appointed to read papers at next meeting: N. M. Dukes, on "Rheumatism;" W. L. Tadlock, on "Typhoid Fever." The subject of "Summer Diarrhœa of Infants" is a topic to be discussed by all, to be introduced by H. L. Campbell. Every doctor come to our meetings and don't forget the time.

Society adjourned at 2:00 p. m.

B. F. BROWN,
President.

N. M. DUKES,
Secretary Pro-tem.

ROBERTSON COUNTY MEDICAL SOCIETY.

The September meeting and the annual picnic of the Robertson County Medical Society was held on the campus and in the chapel of Peoples-Tucker School, Tuesday, September 21, 1915; the meeting was called to order at 11 a. m. by President Henry, with twelve members and three ministers present. Minutes of last meeting read and approved. Clinical cases were reported by Drs. Royster and Fyke.

At this time, the regular order of the program was suspended, and an election held for the purpose of electing a Vice-President to fill out the unexpired time of Dr. T. H. Hassell, deceased; Dr. Wm. Royster was elected. The next order of business was the appointing of a Committee on Resolutions in regard to the death of Dr. T. H. Hassell; Drs. Dye, Shoulders and Royster were appointed. The next order of business was appointing Directors for the October meeting; Drs. Royster, Reeves and Shoulders were appointed, with "Non-inflammatory Diseases of the Uterus and Its Appendages" as a topic for the meet-

ing, and Springfield the place of meeting. Adjourned for dinner, when the Society went out on the campus where the ladies of the Society had spread a sumptuous dinner that was freely partaken of by all present.

Reconvened at 2 p. m., when Dr. L. E. Burch delivered an address on "Cancer." After this address, Rev. D. M. Ausmus spoke a few words in regard to the benefits arising from attending medical meetings, and expressed himself well pleased with the program of the day and his gratitude for the invitation extended him to be present.

Dr. W. A. Bryan read a paper on "Precancerous Conditions." A rising vote of thanks was given Drs. Burch and Bryan for attending the meeting and presenting papers on such interesting subjects; to Prof. Peoples for the use of the chapel and campus, and for dismissing his class in order that the boys could hear the papers of Drs. Burch and Bryan; to the ladies for the excellent dinner they furnished.

The Society had the pleasure of having, as visitors, Revs. Ewton, Ausmus, Williams and Shannon; Drs. Burch, Bryan and Hall, and quite a number of ladies, and Prof. Peoples and his faculty with all of the boys in his school. It was a day that will be remembered by the members of the Society.

B. F. FYKE, Sec'y.-Treas.

HARDIN COUNTY MEDICAL SOCIETY.

The Hardin County Medical Society met in Savannah, Thursday, September 23, and was called to order at 2 p. m. by President G. C. Morris, with the following members present: Drs. Morris, McDougal, Parlow, Walker, Gilbert and Williams. Since last meeting in August, two new applications for membership have been received, and these were passed by the Board of Censors and accepted into full membership.

Under the head of clinical cases, Dr. E. B. Walker reported several cases of diptheria, some of a malignant nature, but no deaths so far. A general discussion was then entered into by the several members present regarding the mortality of diptheria cases that had come under the treatment of the doctors present, and from a series of more than one hun-

dred cases, covering a period of ten years, only six deaths were reported from that number.

Dr. Morris read a paper on "History and Management of Office Cases," and same was discussed by Drs. Walker, McDougal and Gilbert. Dr. Gilbert then read a paper on "Medical Ethics," and Dr. Morris discussed same.

The members feel much encouraged that two new applications for membership have been received since the last meeting in August, as this makes a total membership to date of nine, a little over a third of the number of physicians in the county. The Society is going to be a success, for each member is going to make himself a committee of one to look after new members and in every way work for the betterment of the profession. The next meeting will be held in Savannah, Thursday, October 28th.

OWEN H. WILLIAMS, Sec'y.-Treas.

SULLIVAN-CARTER-JOHNSON.

This tri-county Society, whose membership is composed of physicians from the counties above named, is growing in members, interest and influence. The meetings of the summer months have been held at various places in Carter and Johnson counties and have been well attended and well enjoyed. Enthusiasm is running high and we doubt that any other society in the state is doing better work. The October meeting was held at Mountain City on October 6, and we hope to have a full report of this meeting in the November Journal.

MIDDLE TENNESSEE MEDICAL ASSOCIATION.

The 43rd semi-annual meeting of this Society will be held at Sparta on November 18 and 19. For more than twenty years the Middle Tennessee Society has been at work. It has been of real service to medicine in the section of the state from which its members are drawn. Friendships have been made which have stood the acid test, because of associations brought about by attendance on the meetings of the "Old Middle Tennessee." Many men have received the inspiration and mental stimulation which have led them to success right on the floor of this Society.

Those of its first members who have moved away from Middle Tennessee still love to tell about the things that transpired at the twice-a-year meetings of the "Middle Tennessee," and those who were members in the early days whose homes are yet in this section are members still.

At a good society meeting in a good town is a fine place to be, so Dr. Jack Witherspoon, Secretary, is looking for a fine crowd at Sparta. Dr. F. B. Reagor, the genial President, will be on hand to direct the meeting, and the Sparta doctors will be glad to see you.

GRUNDY COUNTY.

The last meeting of the Grundy County Medical Society was an outing picnic at Wonder Cave, Monteagle, to which the druggists and dentists were invited. We have had a few more successful meetings, but it was undoubtedly the most harmonious in its history because there were present the Secretary and his family only. Except for a few minor differences of opinion between the Secretary and his partner incidental to married life there was not a thing to mar the complete harmony of the day.

A fine dinner was spread, furnished and eaten by our family, after which the Secretary made an after-dinner speech—mostly as an aside—taking good care that his wife, who is a religious woman, did not hear his handling of the Queen's English, the subject, as I remember it, being the "Medical Profession."

After dinner we were shown through the cave by Mr. Payne and we were well repaid for our trip. This cave is well named—Wonder—it is unsurpassed, being in some respects, especially in its fountains, superior to the Mammoth Cave. We wish to publicly thank Mr. Payne for his uniform courtesy and interest in and to us, it being as great as if all the profession, which he expected, had been present.

We wish to recall the ad. in the Journal's want column for a Medical Society Pulmotor; we don't need it, "she's" dead, I reckon. When the next meeting time comes the Secretary, together with Dr. Hayes, of Tracy City, and Dr. Duncan Eve, Sr., of Nashville, will be persecut-

ing the finny tribe in Elk River, and I want to say that a five-pound black cat is easier landed on the bank than some M.D.'s in a Society and an eel easier held. Through the Journal I want to ask the members of Grundy County Society to please meet me at Tracy City the first Tuesday in December so we can elect officers, pay our dues and thus preserve our membership in the State Association if nothing more.

H. LOCKHART, Secretary.

MEMPHIS OPHTHALMOLOGISTS AND OTO-LARYNGOLOGISTS.

The Memphis Society of Ophthalmology and Oto-Laryngology was organized on September 23, with the following members: Drs. Blue, Ellett, Fagin, Farrington, Hill, Hooker, Howard, Levy, Lewis, H. F. Minor, J. L. Minor, F. B. Moore, McKinney, Savage, Shea, Simpson, and Stanford. The Journal is not informed as to whom were chosen for officers except for the Secretary, Dr. Louis Levy, but is quite sure that with so many good men to choose from that the administration of the affairs of this new society was placed in able hands.

Tennessee has as many really good men devoting themselves to special work on the eye, ear, nose and throat as has any state anywhere near her class in the matter of population. As a rule, they are men who strive to excel, who participate actively in every movement intended for the public good, and who lend their very best effort to make their local, state and national medical societies what they ought to be. The Memphis fellows are "hustlers," earnest and capable, and the Journal extends most cordial and sincere wishes for the success of this their newest effort to keep themselves at the fore front in their chosen line of work in scientific medicine.

We have just one suggestion: That the new society should see to it that **all** their members are members of the Tennessee State Medical Association.

CARROLL COUNTY HEALTH SUNDAY.

On Sunday, September 19, the pulpits of nineteen churches in Carroll County were oc-

cupied by physicians of the county. The gospel of sanitation and health was presented to large numbers of the most intelligent people in Carroll County by their own physicians. That the "Health Sunday" work of the Carroll County Medical Society was appreciated and that the people are ready and anxious for the helpful instruction which progressive and publicspirited doctors can and will give them are facts attested by the large crowds of interested listeners that heard the speakers and by the numerous requests that have come for more. In response to invitations to the members to deliver health talks at various places in the county, the Society has assigned speakers and will carry on the work so well begun.

The Journal most heartily commends the efforts of the Carroll County Medical Society and confidently believes that great good will come from this new contact point with the general public.

A list of the speakers who participated in Carroll's first "Health Sunday" is here given:

Carter's Chapel—Dr. Woodall.

Independence, McLemoresville—Dr. G. C. Bryant.

Buena Vista, Hollow Rock—Dr. L. L. Duncan.

Enon—Dr. J. H. Williams.

Everett's Chapel—Dr. E. M. Everett.

Heco—Dr. A. I. Dennison.

Blooming Grove—Dr. J. D. Todd.

Union Academy—Dr. J. F. Aydelott.

Vale, Ephesus—Dr. L. E. Trevathon.

Hickory Flat Springs—Dr. T. W. Thomas.

Humble's Chapel—Dr. J. B. Cox.

Rosser, Zion—Dr. B. C. Dodds.

Pleasant Hill—Dr. J. J. Lancaster.

Hollow Rock (col.), Butler's school house—Dr. Tyler Cox.

Trezevant—Dr. E. W. Hillsman.

West Port—Dr. H. E. Martin.

Williams' Chapel, Poplar Springs—Dr. H. D. McGill.

Huntingdon—Dr. H. H. Shoulders, Nashville.

McKenzie—Dr. Olin West, Nashville.

DAVIDSON COUNTY.

June 29th—Vice-President, Dr. H. M.

Tigert, called the regular weekly meeting of the Academy to order at 8:20 p. m. The following members were among those present: Drs. Harris, Cowden, N. C. Leonard, R. Sullivan, Floyd, Morrissey, Hill, Gaines, C. F. Anderson, Head, Hairman, Dixon, Edwards, McCabe, Williamson, Manier, O. Bryan, Simons, Ward, Goodwin, Orr, D. Eve, Jr., Pickens, Oliver R. Brown, H. King, R. Caldwell, L. Caldwell, Lillian Magan, Margaret O. Davis, R. A. Barr, Pollard, Oughterson, Schnell, Haskell, C. C. Sullivan, Hailey, West, and Fort.

There were two essays for the evening on "Enteroptosis." Dr. W. A. Brygan gave the surgical side of the question and Dr. W. A. Oughterson read on the medical aspect. The subject was then declared open for general discussion.

The Chair called on Dr. J. A. Gaines. He said that he had long regarded neurasthenia as due to some underlying surgical condition. As Dr. Bryan has said, remarked the speaker, these due to visceroptosis often difficult to bring about a cure, though he has often effected a cure by fixation of some organ that has been functionally disturbed. He heartily endorsed the statement of both essayist that if the stomach is displaced and functionally disturbed it should be suspended by one or combination of several methods designed for replacing stomach to normal position.

Dr. Simons said that by a series of phelograms the kidney has been shown to normally vary in position from the first to fourth lumbar vertebra. If the kidney gives distinct symptoms, e. g. Dietl's crisis or pain in the loin, the kidney should be fixed, the pyelography being employed to definitely locate the kidney.

Dr. Cowden said that he had never seen conditions improved by substituting one pathological condition for another, which most of the operations of viceroptosis amounts to in most cases. He believes that there should be a clear indication of failure of function of some organ before any surgery should be done.

Dr. Bryan (closing) said no one should be foolish enough to promise a cure in every case. Rovsing reports 65 per cent to 75 per cent cures, with a 4 per cent mortality.

Dr. Oughterson (closing) remarked that he

never promises these patients anything. Some of his cases, five in all, have fallen into the hands of surgeons and all have been improved. He thinks that the surgeon can offer these patients more hope than the internist.

Case reports were then called for. Dr. Nichol exhibited an X-ray plate of a hip of a child 22 months old, in which there was shown an abscess of the head of the femur. There was a history of an abscess at the age of 5 months at the upper posterior part of the buttock. This discharged for about ten days. About three months ago, when the child began to walk, a limp was noted.

Dr. R. E. Fort exhibited a large specimen of sub-mucous fibroid which he removed from a woman of 34.

Dr. R. A. Barr exhibited a specimen of carcinoma of the kidney.

There being no further business the Academy adjourned at 9:50.

July 6th, 1915—The President, Dr. W. E. Hibbett, called the regular meeting of the Academy to order at 8:25 p. m. The following members were among those present: Drs. Savage, DeWitt, Cowden, Friedman, C. C. Sullivan, Floyd, T. A. Leonard, Tom Briggs; Burch, Billington, O. Bryan, Edwards, Fuqua, Tarpley, Pickens, R. Caldwell, Kennon, Manner, C. F. Anderson, M. O. Davis, McCabe, Dixon, Morrissey, Hailey, Harris, Schell, H. Tucker, R. Barr, W. B. Anderson, and Polard.

The essayist of the evening, Dr. H. M. Tigert, whose subject was, "Cancer of the Cervix."

Dr. L. E. Burch (opening the discussion) said trauma plays a considerable part in the predisposing causes of cancer. Ninety-eight per cent of cases of cancer of the cervix have borne children. He said the disease was one of middle life, and not of old age, though it may be found in the extremes. He described the pathological varieties of cancer of the cervix. He agreed with the essayist that the early symptoms of cancer are not found in the text-book. The speaker thinks examinations are not made sufficiently often by the general practitioner. Every patient with menorrhagia should be subjected to vaginal ex-

amination. He stressed the necessity of repair of lacerations of the cervix as a prophylactic measure. In regard to treatment, Dr. Burch said less radical measures are now being used. He spoke favorably of Percy's treatment. He condemned the public press utterances of men advocating radium and similar methods as cures for cancer.

Dr. Robert Caldwell said menorrhagia should not be stressed, as it is a late symptom. Rather metrorrhagia is to be taken as an early symptom.

Dr. Richard Barr quoted Dr. Murphy as saying that inter-menstrual hemorrhage suggests malignancy, while menorrhagia suggests fibroid. Dr. Barr thinks, at least in his own experience, increased flow at the time of menstruation is the first evidence of cancer.

Dr. Cowden thinks he can see the results of the educational campaign, as more patients are coming to him for examination, fearing they have cancer. He believes the matter of hemorrhage is a late symptom. He described a copper sulphate test, which has proven valuable in his hand in diagnosing cancer. He thinks the Percy cautery the best treatment for late cases.

Dr. Floyd said that C. H. Mayo has called attention to the fact that the majority of cancers occur where there is an acid secretion. He stated that W. J. Mayo says that 50 per cent of the cases come too late for cure; of these, 25 per cent came too late because of lack of knowledge, and 25 per cent too late because advised to wait by their physician. Dr. Floyd thinks it a mistake to do a vaginal hysterectomy or cauterize the cervix, until it is determined whether there are abdominal metastases. The latter can be determined only by opening the abdomen. It is Dr. Floyd's opinion that trauma is the chief etiological factor.

Dr. McCabe stated that he does not believe strongly in the efficiency of Dr. Cowden's copper sulphate test.

Dr. Hailey urged that patients be examined at the end of a year after child-birth for tears that they may be repaired and this factor is eliminated as a cause.

Dr. Tigert (closing) thinks the profession itself is the cause of the delay in the recognition of cancer. He condemned radium and

X-ray as curative agents. He does not agree with Dr. Floyd that trauma is the chief etiological factor. Dr. Tigert said that hemorrhage may be the first symptom of cancer, and so profuse as to cause death. However, he believes the slight increase in the amount or the slight prolongation of a period the first symptoms. Watery discharges and bladder symptom are early indication of cancer of the cervix.

Under the heading of "Case Reports," Dr. Pollard reported a case of cancer of the gall bladder in a woman thirty-four years of age.

There being no further business, the Academy adjourned at 9:30 p. m.

Book Reviews

THE STARVATION TREATMENT OF DIABETES.

By Lewis Webb Hill, M.D., with a Series of Graded Diets, by Rena S. Eckman, and an Introduction by Richard C. Cabot, M.D. W. M. Leonard, Publisher, Boston. \$1.00.

This little volume is intended to furnish the physician the details of the treatment of diabetes devised by Dr. Frederick M. Allen, of the Rockefeller Institute. The author declares Allen's "starvation treatment" to be the latest and most successful plan, and Dr. Cabot subscribes to this statement. The whole procedure of dealing with diabetes as advocated and practiced by Allen is carefully and clearly outlined and explained. Complete diet lists are given and rules for feeding laid down. There can be no doubt as to the helpfulness of this work to any who must contend against diabetes, the disease of all diseases which most puzzles the average physician.

THE CLINICS OF JOHN B. MURPHY, Volume IV, No. 4. August, 1915. W. B. Saunders Company, Philadelphia.

In a "Talk on Syphilis" in this number of his "Clinics," Dr. Murphy gives very positive expression of his preference for sodium cacodylate over salvarsan. He insists that daily injections of the sodium cacodylate will heal primary lesions faster than "606," and considers that when primary lesions can be uniformly cured in from six to ten days the syphilis problem will be solved.

Among the numerous cases described in this number is one of "Typhoid Spondilitis in a Typhoid Carrier." Murphy suspected the cause of the spondilitis, had made the examinations necessary to convict the patient as a carrier, performed appendectomy and cholecystotomy and reported blood, urine and feces free from bacilli after three weeks. Dr. Murphy uses this case to impress the great importance of searching for a primary focus of in-

fection in arthritic cases.

A number of instructive cases are described and elucidated in this number of the clinics, illustrative of a wide variety of surgical conditions and their treatment.

A SYNOPSIS OF MEDICAL TREATMENT. By George C. Shattuck, M.D., Assistant Physician Massachusetts General Hospital. W. M. Leonard, Publisher, Boston, 1915.

This little work is just what the title indicates—a synopsis—but it is a very fine synopsis. Its chief value lies in the fact that it presents an outline of the methods used by one of our best men in one of the best of all hospitals and in his own private practice. The author's classifications of valvular disease and nephritis are given and treatment outlined on that basis. Chapter V is on "Drugs." The first paragraph of a "foreword" to this chapter shows the attitude of Dr. Shattuck—"He who masters the use of a few good drugs will succeed better than he who tries many at random."

PRACTICAL MEDICINE SERIES—PEDIATRICS—ORTHOPEDIC SURGERY. Vol. v, Series 1915. The Year Book, Publishers, Chicago.

This is the usual good review of literature on subjects which are here properly discussed and is up to the standard of previous volumes of this popular "series."

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THE JOURNAL

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CHRONIC ULCER OF THE LEG.*

By W. Scott Farmer, M.D.,
Cookeville, Tenn.

Since I have been in the practice of medicine, a period of nearly twenty-five years, I do not remember to have heard a paper read from the above subject at any medical society I ever attended, and in referring to medical and surgical works I find that Chronic Ulcer of the Leg is dealt with rather lightly compared to many other subjects. It appears to me that there is a lack of interest on the part of the medical man upon the subject of leg ulcer. I have more than once heard a brother doctor remark: "That patient has an old ulcer of the leg and cannot be cured, and there's no use to fool with him." Just why many physicians seem to think a chronic ulcer of the leg incurable and lose interest in the case I fail to see, unless it is the fact that many of these cases occur in the lower walks of life, and the patient is not financially able to have the proper treatment. While I have no new theories to offer, nor do I claim to be an expert in the treatment of leg ulcer, I am impressed with the fact that too little attention is often given to this subject, by the general practitioner especially, and that is what has stimulated me to write this article. If we knew the number of people in the state of Tennessee today afflicted with chronic ulcer of the leg that have gone from one physician to another and failed to get re-

lief, the information would be surprising. Finally these patients give up in despair and wear old dirty, greasy bandages around their legs for the remainder of their lives. While I admit some leg ulcers may be incurable, by far the majority of them can be cured if the physician will not become discouraged and will exercise patience, diligence and painstaking care in the treatment of these cases.

In the classification of ulcers it must be considered that one or several factors may be concerned in the etiology: First—predisposing causes, (a) general, (b) local, (c) exciting causes. In the predisposing causes are age, sex, occupation and social conditions. Old age is accompanied by retrogressive tissue changes, atheroma of the arteries, impaired circulation, etc., and one would expect the statistics to show a greater proportion of ulcers during the latter decades of life. As regards sex, I believe that it is said men are more afflicted than women in the ratio of three to one. Men are probably more exposed to traumatism. Also the greater prevalence of syphilis and alcoholism in men may in some measure explain why ulcers are more common among them than women.

Occupation seems to have little to do with etiology of ulcer beyond the fact that it may predispose to traumatism or various forms of infection and that it may prevent cleanliness. In the lower walks of life lack of means or lack of intelligence as well as untidy habits will allow filth and with it, of course, infection will enter the wound of a slight abrasion and the formation of an ulcer is the result. In chronic ulcer of the leg the role of cleanliness always plays a most important part.

*Read at meeting of Tennessee State Medical Association, Nashville, April, 1915.

Many constitutional diseases, such as diabetes, anemia, tuberculosis and syphilis lower the vitality of the tissues, and other conditions such as valvular heart disease and atheroma may prevent proper circulation and predispose to the formation of an ulcer.

Of the local predisposing causes, frost bite might cause some motor disturbance and predispose parts to an ulcer. Varicose veins by preventing a return of venous blood predisposes to ulceration, but we also know that it is a fact that we see varicose veins even to a severe degree without any ulceration.

Of exciting causes, traumatism is one of the most frequent causes of ulcer. Infection also is one of the exciting causes and some of the staphylococcus or streptococcus groups of organisms as well as the tubercle bacillus or the spirocheta pallida may produce an ulcer. Epitheliomatous and sarcomatous ulcers of the leg are sometimes found.

It appears to me that the classification of ulcers is somewhat complicated, entirely too complicated for the general practitioner, but we are told by the specialist—and I do not doubt it—that we have the actinomycotic ulcer, the amular ulcer, the blastomycotic ulcer, the callous ulcer, epitheliomatous ulcer, perforating ulcer, syphilitic ulcer, tuberculous ulcer, varicose ulcer, and others too numerous to mention. While this classification is very nice for the specialist, to me a general practitioner an ulcer is an ulcer and I do not try to be able to differentiate the different kinds of ulcers except in a general way. If I find an ulcer on the lower part of the leg I suspect to find varicose veins, but if I find an ulcer on the upper part of leg, I suspect it to be of syphilitic origin. I have also found out that varicose ulcers are usually single and syphilitic ulcers are often multiple. I also find it is for me at times hard to tell whether I have a syphilitic or varicose ulcer to deal with, and I always give my patient in these cases the mixed treatment which will clear up the doubt. The writer is becoming daily more strongly persuaded that many people, and especially old people, are honestly ignorant of the fact that they have had syphilis. This is particularly true in women, and if I have a case that resists ordinary treatment I always suspect syphilis. I believe a good working rule for the practi-

tioner should be to look upon ulcer as syphilitic or non-syphilitic. Like ulcers in any part of the body, those affecting the legs may take on many forms, all of which are nothing more than modifications of two conditions, i.e., sluggishness and irritability.

An ulcer may fail to heal because of severe infection, because of want of rest, because of absence of granulations resulting from deficient blood supply, because of edematous granulations, because of exuberant granulations, because of adhesions to deeper structures, or because of some constitutional disease. I also find that ulcers on the outer part of the leg heal more readily than ulcers on the inner side of the leg. There is a peculiar painful form of ulcer found over the internal malleolus, most frequently in women of middle age, although it occurs in men, that is very difficult to cure, and once cured is liable to return. It is often associated with menstrual disorders in women and associated with varicose veins and is known as a congested or irritable ulcer. The time required to cure an ulcer is usually from four to twenty months.

How fast will an ulcer heal under proper treatment? If an ulcer heals one-eighth of an inch in diameter per month it is doing fine. Of course, there will be times that it will appear that it will heal in a few days and the next time you see it it will be worse and it will appear to be growing larger and becoming more stubborn, but don't be discouraged—some disease are worst just before the crisis, and while an ulcer does not end by crisis, I have at times been almost ready to quit a case of ulcer after months of treatment to find that the ulcer was beginning to heal kindly and go on to complete recovery in a few weeks. Recognizing the above fact, when a patient asks me can I cure his or her ulcer, I tell them, "Yes, the majority of ulcers can be cured," and if they will put up the price I will do the rest. I am very careful to tell them that it will take a considerable time and that the patient as well as the physician must pay attention to the minutest details. With this understanding I will take the case, otherwise I prefer that they consult some other physician.

Treatment.—I know of no disease in which the physician has access to so many different remedies for any one disease as in ulcer, and

as a general proposition, when so many different remedies are recommended for one condition, none of them are of much value, but I do not think that this will apply to ulcer of the leg. The treatment is both local and constitutional. The latter consists in building up the system by tonics and in treating those diseases which act as direct or predisposing factors in the etiology—such as gouty diathesis, arterio-sclerosis, diabetes, etc. It is very important to improve hygienic surroundings if possible, to administer mercury and iodide of potassium in syphilis, tonics, fresh air, etc., in the tubercular, and iron in the anemic.

Local Treatment.—In considering the subject of local treatment there are many things to be considered in order to effect a cure:

1. Reduce the inflammation in and around the ulcer.
2. Cleansing and sterilization of the ulcer itself.
3. To stimulate granulations.
4. To establish the proper blood supply.
5. To stimulate epithelial growth.
6. The palliative and operative treatment of varicose veins.
7. To treat complications.

The first time we see these cases they are often in a state of inflammation and our first duty is to relieve the inflammation and pain. Moist dressings should be selected. They are (1) aseptic, (2) they permit free drainage, (3) no granulations are disturbed in dressing. We have many to select from: (1) sterile water, (2) saturated boric acid solution, (3) Burrows' solution (aluminum acetate 40 grs. and 200 lead acetate in a pint of water,) (4) 2% carbolic solution, (5) 1 to 10,000 bichloride mercury, (6) 2% creolin, (7) "black-wash," (9) a weak solution of ichthyol. Any of the above solutions applied on gauze and kept moist are good to reduce the inflammation.

Second: Cleansing and sterilizing the ulcer. Before healthy granulation can form all sloughs must be removed. The destruction of sloughs can be hastened by cauterization with nitrate of silver. One of the best things to do to clean an ulcer is to wash it in tincture of green soap, peroxide hydrogen next, then some sulphuric ether, and last with 95% alcohol.

Third: To stimulate the granulations we have powders galore—alum, zinc oxide, bis-

muth sub-nitrate, iodoform, aristol, calomel, orthoform and others; of solutions, nitrate of silver, sulphate of zinc, potassium permanganate, ichthyol, balsam of Peru and others; of ointments, Lassars' paste, salicylic acid, oxide of zinc, ichthyol, mercury, boric acid, and scarlet red. All of the above drugs have their advocates. The oldest, I believe, is balsam of Peru, and it has served me well, as it will hasten granulations, but in some instances will aggravate the pain, especially of an irritable ulcer. In this connection I will say that orthoform will ease the pain of any ulcer, but may cause gangrene. Of the ointments I consider scarlet red one of the best I ever used. It should be spread in a very thin layer over the entire surface of the ulcer on a piece of sterile gauze and over this an ordinary dry sterile dressing. If the ointment is spread too thick it may cause the granulations to break down, and for that reason should be spread very thin. The dressing should not be disturbed for two or three days if possible, and reapplied as indications warrant. This ointment stains everything it touches, and if applied to a very large ulcer it is sometimes absorbed in sufficient amount to color the urine red. In regard to ointments, it may be said that their use is generally contraindicated where there is a profuse discharge that prevents its absorption by the dressing. To remove the stains of scarlet red benzine is the best application I ever used. When an ulcer is very indolent the application of solid stick nitrate of silver or copper sulphate in strength of one to twenty-five per cent may induce some inflammatory action. The applications of antiseptic and astringent powders find their chief use when the discharge is small and when the ulcer will heal under a scab. In the majority of cases the best results will be obtained by the use of wet dressing, which not only stimulates granulations, but also absorbs the discharge. Many other therapeutic measures have been employed to stimulate granulations, as the X-ray, Biers' hyperemic treatment, skin grafting, etc. If an ulcer is adherent to the deeper structures and will not heal (you often find this condition near the internal malleolus) make slight incisions in the bottom and edges, first cocaineizing the ulcer. These incisions stimulate granulations. After the incisions,

elevate the parts and treat antiseptically for two or three days and then scrape the ulcer with a curette until sound tissue is reached and then paint adjacent parts with tincture iodine and alcohol (1.3) and apply ichthyol around the ulcer. This may stimulate it to heal.

In regard to Biers' hyperemia treatment by means of baking or hot air, this has served me well in some cases, while in others it has not. The patient is required to bake the limb at a temperature of 300 to 350 degrees F. once or twice a week for an hour at a time. In an ulcer with varicose veins it is impossible to cure until the chronic congestion of the limb is relieved and the blood supply approaches the normal. Often all that is necessary is a flannel or rubber bandage applied properly from the ankle to the knee and rapid healing will take place, but in many cases the rubber bandage will have an irritating effect on the skin. Compression is of such absolute importance in the treatment of chronic ulcers of the leg that without it everything else often fails. This being so, the rapidity and completeness of cure will depend very much on the manner in which the bandage is applied, and ulcers of the leg would heal faster if the physician could always apply them. We must often teach the laity how to apply these bandages. Where the discharge is profuse it may be necessary to dress the leg every day at the beginning of the treatment. But, generally speaking, an ulcer of the leg is disturbed too often. Let the dressing remain on until some uneasiness points to the propriety of taking it off for the escape of the discharge. Taking an average case, the dressing should not be disturbed oftener than once in three days. Whenever possible these patients should be kept in bed, or at least in the recumbent position with leg elevated, but many of our patients will not stay in bed and we have the consolation of knowing if we heal the ulcer while the patient is attending their ordinary work that the ulcer is not so liable to return. One of the most essential features in the treatment of ambulatory cases is a good dressing to prevent congestion, and Unnas' paste is an ideal one (white gelatin $2\frac{1}{2}$ oz., water 8 oz., zinc oxide $2\frac{1}{2}$ oz., and glycerine 4 oz. Heat and stir briskly until cold.) The paste is melted before applied, but

no water applied in heating. The leg is cleaned and the paste is applied with a small paint brush as hot as the patient can comfortably tolerate from toe to knee; then a gauze bandage two or three inches wide is applied, then another layer of paste, and in this manner two or three thickness of bandage are used, depending on the case, and after last application some non-absorbent cotton is spread on the bandage, giving it the so-called mole skin finish. This dressing may remain on one week or ten days. If there is much discharge from the ulcer a window can be cut out for drainage. To remove the bandage, scissors is all that is necessary. While I have seen the above applied, I have not used it in my practice. It is very important in the treatment of ulcers to obtain a sound scar, and skin grafting is often resorted to to obtain this result, but I have not had any experience along this line. Many other things can be done in order to insure healing, such as strapping, circumcision, blisters, and lately I believe that X-ray is claimed to cure most any ulcer. The latest fad (if it can be termed a fad) is radium in the treatment of leg ulcers, especially if there is a suspicion of malignancy. It is claimed that both the Gamma and the Beta rays have curative properties, and I hope some one that knows better than I can tell us about this.

There are many other things that can be done for a patient with a chronic ulcer of the leg not spoken of in this paper, one of which is to inspire confidence in your patient—let us never say that it cannot be done. I now come to the most important part of the treatment of chronic ulcer of the leg and then I am done, viz.: In order for any physician to successfully treat these conditions he must dress his patient's leg himself. Often this cannot be entrusted to a nurse, patient, or any one else, for it is necessary for the physician to get well acquainted with the freaks and antics of the particular ulcer he is treating; in other words, each ulcer is a law unto itself and if the physician cannot take the time to properly dress these ulcer cases he had best refer them to some other physician that will take the time to dress them properly. I want to repeat that the majority of ulcers can be cured and we physicians should always remember that "I

can't" never accomplished anything in this life, but "I will try" may work wonders.

CLASSIFICATION OF IRREGULARITIES OF THE HEART BEAT.*

By Larkin Smith, M.D.,
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Irregularity of the heart beat is a clinical phenomenon that has been observed by patients and doctors and recorded by the latter for centuries, but it is only in the last ten or eleven years that a more or less accurate classification of the commoner forms of irregularity has been formulated.

The determination of the form of an irregularity is of three-fold value:

1. It is of importance in bringing out other physical signs, especially auscultation, and thus assisting diagnosis.
2. It often influences prognosis.
3. It frequently very decidedly determines the line of treatment.

A table of classification of the various forms or irregularity of the heart beat, given general recognition at this time, follows:

1. Sinus arrhythmia -----	5%
2. Alternation of the pulse----	5%
3. Auricular flutter -----	
4. Auricular fibrillation -----	41%
5. Paroxysmal tachycardia ----	10%
6. Heart block -----	5%
7. Extra systoles -----	34%

Also there exist forms of arrhythmia which have not yet been classified.

The relative frequency of the different forms of irregularity, considering all kinds and at all ages, is shown in the percentages at the right.

In all cases of obvious heart failure with irregularity, in at least 60%, the auricles are fibrillating.

Sinus Arrhythmia.

Sinus Arrhythmia.—Frequently when examining children, and not infrequently young adults, particularly when breathing deeply, there is noticed an alternate acceleration and

slowing of the heart beat. Closer observation reveals the fact that the acceleration and slowing are co-incident respectively with inspiration and expiration, and this form of irregularity is classified as sinus arrhythmia. The sino-auricular node, situated in the sinus at the junction of the superior vena cava with the right auricular appendix, possesses the power of rhythmically producing the stimulus for the normal contraction of the entire heart, and it is called the heart's "pace-maker." The pace-maker is under the control of the vagi, and factors influencing vagal tone influence the pace or rate.

Sinus arrhythmia is common in the dog. If the dog's vagus is severed this irregularity disappears. In childhood all the functions are unstable; children laugh and cry on slight provocation; their temperature goes up from trivial causes; and variations in vagal tone with the accompanying effect upon the pace-maker, resulting in arrhythmia of this type, should be looked upon as an indication of this same tendency in children. This form of irregularity is easily recognized. The hand on the pulse shows the rate constantly changing with inspiration and expiration. The radial beats are full and of even force. The heart sounds are distinct and the interval between the first and second sounds is always of the same duration. This irregularity is abolished by anything that raises the pulse rate, as exercise, fever or by paralyzing the vagal terminals of atropin. The form of sinus arrhythmia described is not of unfavorable prognostic significance, in fact it can be looked upon as a normal phenomenon. Therefore there should be no treatment for the condition, nor should the individual, on account of it, be required to modify his habits or mode of life, or what in these youthful cases means so much—the choice of a career.

By *alternation of the pulse* is meant that alternate beats vary in force, a strong beat then a weak beat, then a strong one and so on. The rhythm is regular. It may occur in hearts that are damaged in their muscle or in hearts that are overworked. It is an evidence of a much weakened function of contractility.

Usually a sphygmograph is required to detect alternation, but in some cases it can be felt by the finger on the radial artery.

*Read before Nashville Academy of Medicine, October, 1915.

It can easily be differentiated from the dichrotic pulse by the fact that there is only one apical beat for two at the radial in the latter. It is seen oftenest in older persons, especially men, suffering with high blood pressure, kidney disease, angina pectoris and fibrctic myocarditis. It is sometimes observed in the failing heart in pneumonia.

Prognostically considered, it is one of the few clinical signs which simply and alone should always be looked upon as an evil omen. In the words of one authority, "It is the faint cry of an anguished and fast failing muscle, which when it comes, all should strain to hear." When made out, of course, rest, absolute and immediate, is imperative.

Auricular flutter is a recently discovered form of irregularity, detectable only by special apparatus. It is characterized by extremely rapid beats of the auricle, 150-350 per minute, and these beats are perfectly regular. Along with this there usually exists a partial degree of heart block, so that the ventricular rate (radial pulse) is less rapid, usually 2:1. The condition is believed to be not uncommon, but difficult of detection.

Auricular fibrillation is the commonest and therefore one of the most important forms of heart irregularity. As already stated, it constitutes over 60% of the cases of irregularity seen in obviously failing hearts.

If the beat is rapid, 100 to 160 to the minute, simply with the finger upon the radial pulse, it is the most easily detectable of all the irregularities which modify the heart beat.

No two beats are alike in force or volume and they follow at decidedly irregular intervals in a most disorderly manner. Auscultation reveals decided modifications in the heart sounds. They vary in intensity and the variation coincides with the strength of the pulse beat.

The mechanism of its production: Normal impulse formation in the pace-maker (sino-auricular node) is replaced by stimulus production at numerous foci in the muscle of the auricle. Co-ordinate contraction of the auricle ceases, and the rapid and irregular impulses from the auricle passing to the ventricle bring about its tumultuous action.

The condition is oftenest observed in cases of mitral valve disease, especially stenosis.

When once established it usually is permanent, and with some few exceptions remains until the end. These are the cases in which we expect and often realize such brilliant results from the administration of digitalis.

Paroxysmal tachycardia is a condition characterized clinically by the abrupt inception of a very rapid rate of the heart beat, and after a duration of a varying length, a return to the normal rate as abrupt as its beginning. The rapid contractions of the heart are started from some point in the auricle extrinsic to the pace-maker.

The rate of beat usually is from 150 to 300 per minute.

Its duration from a few seconds to several days.

The beat may be regular or irregular.

It seems difficult to separate this condition from paroxysms of auricular flutter and auricular fibrillation with sudden onset and abrupt termination.

If the heart does not give evidence of organic disease, and often it does not in about half the cases, and the attack is not of long duration, the patient quickly returns to the normal with the sudden resumption of the usual regular rate.

On the other hand, if the attack is prolonged or if the heart is otherwise damaged, or both, rapid dilatation and failure quickly supervene.

Heart Block.—The stimulus for contraction reaches the ventricle from the auricle by passing along the only bundle of muscle connecting these two chambers. It is commonly known as the bundle of His or the bundle of Stanley Kent, or possibly better as the auriculo-ventricular bundle. Pathological changes in this bundle may bring about three degrees of impairment of the stimulus conductivity of this structure.

1. Transmission of stimuli may be delayed.
2. Some of the stimuli may be blocked.
3. All stimuli may be blocked.

The first two conditions are spoken of as partial heart block, while the third is described as complete heart block.

Evidence of delayed transmission is shown in the lengthening of the interval of time between auricular systole and ventricular systole.

If some of the stimuli are blocked it is evi-

denced by the auricle contracting oftener than the ventricle; sometimes in ratios of 2:1, 3:1, 4:1.

Delayed transmission of stimuli and the lower grades of partial block can be satisfactorily determined only by special apparatus; but the higher grades of partial block and complete block may be recognized from other clinical manifestations, i. e., if there is a slow radial pulse, due to the less frequent ventricular systoles, while at the same time the veins in the neck pulsate more frequently than the radial, owing to the normal rate of the auricles being maintained.

If the radial pulse is over 36 to the minute, it may be in a 1:2, 1:3 or 1:4 ratio to the auricular contractions, as shown by the jugular pulsations. If the radial pulse is thirty or less, then in all probability complete block exists and the auricles are likely beating at or above the normal rate.

The diseases which affect the auriculo-ventricular bundle, diminishing its powers of conductivity, are the diseases that generally affect the heart, the various infections, especially rheumatism, syphilis and senile changes, for the involvement of the bundle is as a rule merely a part of some process that is widely invading the myocardium.

Some of these cases show a further slowing of the ventricular rate, twenty or even eight to the minute, when unconsciousness supervenes and epileptiform convulsions occur, constituting the Stokes-Adams syndrome.

The prognosis and treatment in great measure are those of the disease of the heart of which the involvement of the auriculo-ventricular bundle is only a part.

Premature contractions or extra systole is a common form of irregularity and one that is often perceptible, subjectively, to the patient. He usually describes the sensation by saying that his pulse has dropped a beat, and it is often the cause of much anxiety to him. Upon examination what is found is that at the moment of disturbance a ventricular contraction occurs before the rhythmic beat is due and that this early beat is followed by a pause of unusual length. It is the pause that the patient notices.

These premature contractions originate from impulses formed in new and isolated

foci in the muscle of the auricle or ventricle, more often the later. This form of irregularity is oftenest found associated with any of the gross lesions of the heart. Also in younger individuals addicted to the excessive use of tobacco, and it is sometimes shown by hearts when under the full influence of digitalis. Again we not infrequently see it exhibited in individuals in whom we can trace no causative factor. Prognostically we may summarize by saying that while extra systoles are of relative insignificance as compared to many forms of irregularity, it is true that of cases seen today, some of which show extra systoles and some of which show none, the occurrence of grave irregularities in later years will be greater in the former than the latter. The existence of extra systoles per se should not cause us to advise the patient to modify his mode of life, but these individuals should be re-examined from time to time.

If this occurrence should become distressing to the patient, some relief is to be expected from the administration of bromides.

Noting the varying prognostic gravity attaching to the several forms of heart irregularity, it becomes one of our serious and difficult discriminating duties to indicate to our patients the limitations or the freedom that may apply to their actions and mode of life.

We live (physically) but once, and it is worse than cruel, it is unjust, if unnecessarily we interdict the activities that would lead to a successful career and condemn an individual to a vegetative existence of semi-invalidism. On the other hand, it may be almost criminal if we fail, positively and firmly, to warn those who by unusual exertion or even by following a moderate routine of conduct may place their lives in jeopardy.

It devolves upon the physician to determine the course to follow in each case, and he can be materially assisted in this task by a careful study and differentiation of these several forms of irregularity.

Some may urge the objection that to differentiate the arrhythmias, special apparatus is required. While the use of such apparatus certainly conduces to a greater accuracy, the careful observation of all the physical signs will in most cases lead to correct conclusions.

EGG MEMBRANE A SUBSTITUTE FOR BONE GRAFTS, ET AL IN TRAUMATIC DEFECTS OF THE SKULL.*

By B. B. Cates, M. D.,
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The lamentable and tragic sequelae following traumatic defects of the skull have stimulated surgeons for years to devise some method to bridge over these defects so as to prevent adhesions between the scalp and dura, and consequent irritation of the underlying structures.

Hence many methods, and many different things have been recommended in such cases, from autogenous and heterogenous living tissue, to certain foreign inert substances, as celluloid strips, silver plates, egg membrane, etc.

The ideal method is that which closes defects in the skull with homologous living tissue, such as sliding the outer table of the skull over such openings, or autogenous grafts from other bones. Naturally heterogenous grafts in the skull, like such grafts in other parts of the body, have not given very satisfactory results.

Obviously any method that supplies these defects with foreign inert substances is unscientific and unsurgical; as owing to a lack of fusion with the proper anatomical structures of the parts they may become displaced and cause pressure symptoms of the cranial contents.

Now, as the limited time at our disposal will not permit of an exhaustive review of the individual merits of all the different varieties of methods that have been tried in traumatic defects of the skull, I shall dismiss their discussion with the injunction that any one interested in such matters may have his heart's ease by consulting the more exhaustive works on surgery.

There is a class of head injuries with limited loss of bone substance that give very satisfactory results by inserting into the opening egg membrane.

This membrane being relatively soft and pliable meets the etiological indications in such cases, in that it prevents adhesions between the scalp and underlying brain, and while it moulds itself to the contour of the brain without irritating the cerebral cortex of the brain, has sufficient tensile strength to preserve the natural contour of the scalp to a certain extent.

While I have no data to offer in regard to a large number of cases in which egg membrane has been used, I can report a case of gun-shot fracture of the skull, followed by partial paralysis of the right arm and right leg, and stammering, which after four years developed convulsions, and in which egg membrane was satisfactorily used.

In this individual the paralytic symptoms have entirely disappeared, the speech is improved, and the convulsions have not returned. Now, I am profoundly conscious that the time limit is too short to crow loud and long over a single case; I also know such cases are for a time benefited by any kind of operation on any part of the patient's anatomy.

However, I feel an apparently successful result may stimulate others to try in such cases to cure one of the most pitiable sights a physician meets in his practice, that is, a patient afflicted with traumatic epilepsy. The following case may be of interest, as it illustrates the kind of case that can be benefited by egg membrane in skull defects.

Geo. R., white, Age 17. Family history first class. His father, mother, one brother and one sister living and in good health. *Personal History*—On September 24th, 1909, he and a companion were returning home from a frog hunt. They were walking "Indian file" through a field, the companion walking in front carrying a .32 calibre rifle on his shoulder.

In ducking under some willow overhanging their path the hammer of the rifle caught on the willow branches. The gun was discharged, and the ball plowed a furrow through the outer table of George's skull, just to the left of the meridian of the skull and about two inches from the hair line over his forehead.

George was picked up unconscious, and carried to the hospital. The inner table of the skull was splintered. There was not much hemorrhage either intra or extra dural. I

*Read before the East Tennessee Medical Society at Athens, Tenn., May 20, 1915.

simply enlarged the wound, removed all loose fragments and drained. The lad remained unconscious for a about one week. He recovered after a long time, the wound healing slowly, with partial paralysis of his right arm and right leg and slow stammering speech.

He remained in this condition until December 7th, 1914. On that day I was called to see him. He was running some temperature and had severe headache. As he lived some distance in the country, I did not see him again until the ninth of December, when I was hurriedly called as he was having convulsions and soon passed into status epilepticus.

As he lived so far away we did not get him to the hospital until night and he was in no shape for operation. His condition improved and the convulsions stopped under blood letting and sedatives. As soon as his condition warranted it, I opened the old wound in the skull by a trap door flap incision through the scalp, so as to investigate conditions.

There was a mass of cicatricial tissue connecting the scalp and dura. I enlarged the opening in the skull, dissected away the cicatricial tissue and dura and inserted egg membrane so adhesions between the brain and scalp could not take place. The boy recovered rapidly from the operation and left the hospital in eight days. There has been marked improvement in his speech and his general facial expression is improved.

He has as strong hand clasp as any boy of his age. He walks, however, with a limp on his right side. This, I attribute in a measure to atrophy of the muscles of that limb due to the fact that for years he dragged the limb in walking. This limp in walking he tells me is improving.

SPOROTRICHOSIS WITH THE REPORT OF A CASE.

By Harry F. Friedman, M. D.,
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Sporotrichosis is a comparatively new disease. Dr. Beurmann of Paris, has probably done the most in bringing this rare and peculiar malady before the medical profession;

certainly he has proved its importance. Sporotrichosis, however existed beyond a doubt before his discoveries and was confused with syphilis, tuberculosis, coccal infection et cetera which in external appearance it closely resembles, and from which it is necessary to distinguish.

Sporotrichosis is an infection common to man and animals. It is caused by a filamentous, spore bearing fungi of the genus *Sporotrichum*; *Sporotrichum Schenki*, *Sporotrichum beurmanni* (and its varieties, *Sporotrichum buermanni* variety *asteroides*, *Sporotrichum buermanni* variety *indicum*) *Sporotrichum jeanselmei*, *Sporotrichum gougeroti*, *Sporotrichum dori*, each parasite serving to define a sporotrichosis of the same name. There are therefore not one but several sporotrichosises. The variety most frequently met with is that which is caused by the *sporotrichum beurmanni*. It has been met with at all ages and in all surroundings. Besides man, the horse, mule, rat, dog, are known to have become infected.

The greatest number of cases have been found on the continent and in England. In this country there have been only a few cases reported but we are gradually waking up to its importance and recognition. The question of the relationship of the different varieties of *sporotrichum* is a very difficult one and is too essentially a botanical question to be dealt with in this paper. It is very probable that they are all derived from a common parent stock.

5

Parasitology.

The *sporotrichum buermanni* is filamentous and spore bearing. The mycelium is creeping (*repens*) fine, measures about two microns in diameter, is partitional, colourless, much branched and tangled. The spores are found along the length of the recumbent filaments, either at their extremities or on branches. They are arranged in cylindrical cuffs, about ten microns in size, and in glomeruli. The spores are isolated from one another.

There seems to be no apparent order in their arrangement. The spore when seen on the filament appears to be pear shaped. It is attached by a very fine sterigma from two

microns in length and from .5 microns in width.

The form, the disposition, the brown colour of the spores, and their fructification in the form of cylindrical cuffs, arranged in bunches at the extremity of the filaments, constitute, together with the original substratum of the fungus, a group of characters which differentiates this variety sharply from all the other sporotrichums. (Matruehot.) In the tissues and in pus this parasite looks very differently. It has a short oblong form. In fact it looks very much like a bacillus, from 3-5 microns in length and 2-3 microns in breadth, basophilic and finely granular, and surrounded by a very fine colourless membrane. This short or rod shaped variety, a form produced by facultative parasitism, is found in all the lesions in men and animals, even in the epidermic scales.

Pathological Anatomy.

The sporotrichum buermanni may give rise to multiples lesions in the tissues. The most characteristic is the nodule, in which we find three processes, sometimes arranged concentrically; in the center an abscess containing

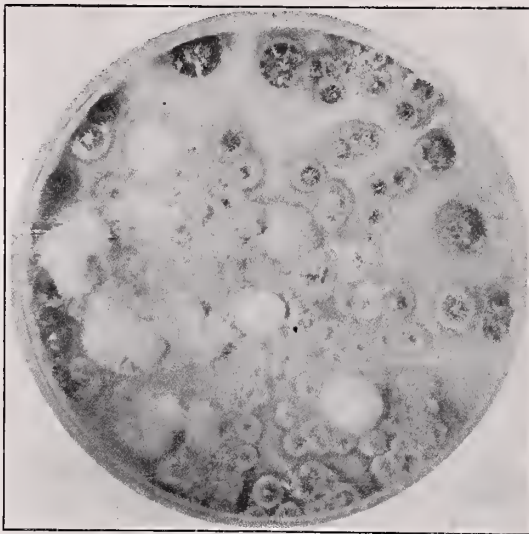


Plate showing sporotrich growth.

polynuclear leucocytes and macrophages; in the intermediate zone an area of degenerated epithelioid giant cells and tuberculous follicles, at the periphery a proliferation of connective

tissue cells or a fibro-cellular infiltration.

Therefore sporotrichomota are very closely allied to lesions caused by syphilis, tuberculosis, and coecal infections.

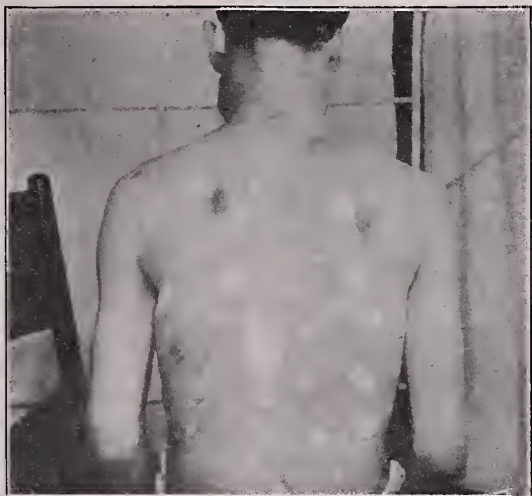
Etiology and Pathogenesis.

The sporotrichum buermanni is met with in a saprophytic state in nature, two specimens having been found to grow wild in the French Alps. It grown on vegetables, living or dead. It is easily cultivated at temperatures varying from 12-40 degrees; the optimum temperatures being between 20 and 30 degrees. At ordinary temperatures they preserve their vitality for years. They are only slightly sensitive to the action of the sun's rays and the inclemencies of the weather. Cultures left in the open air have been known to live for over a year. The sporotrichum is very hardy, it vegetates on poor soil, such as bark and thorns, and has been found on salad, on potatoes, grain et cetera. Therefore the opportunities for coming in contact with it are very frequent. The intermediate agents which may introduce the germs of sporotrichosis into the organism are exceedingly varied. One of the chief modes of inoculation is through a wound in the skin or mucous membrane. The case of Gaston and Brodier was in a market woman, and the sporotrichum was found on the salad, which she was in the habit of selling each day. Dominici and Duval reported a case of gummatous ascending lymphangitis of sporotrichal origin, developing as a sequence to a finger cut sustained in peeling a potato. Various other cases inoculated in a similiar way have been reported in the literature on the subject. Cases of animal origin have also been reported—Lutz having a case which was inoculated by the bite of a rat, in Brazil.

Carongeau has reported a case of a veterinary surgeon, who inoculated himself by pricking himself with a bistoury which he had used to open sporotrichotic abscesses in mules and horses affected with the epizootic equine sporotrichosis of Madagascar.

DeBuermann has shown that the sporotrichum may live as a saprophyte in the pharynx of certain persons, "carriers" of the organism; and may inoculate an insignificant abrasion by wetting it, as is the popular cus-

tom, with saliva. The healthy epidermis may act as a portal of entry. The sporotrichum may invade the hair follicles, and may set up a folliculitis, or acne, and then gain the lymphatics. The invasion of the organism may also take place thru a mucous membrane. From these portals of entry the germ may be taken by the arterial stream or the lymphatics and carried throughout the body. It has been proven that in disseminated sporotrichosis the parasite is carried by the arterial blood



Disseminated subcutaneous gummatous sporotrichosis with ulceration. Note the areola around some of the resulting cicatrices.

stream. Widal and Weill were the first to show this by haemoculture. In the systemic lymphatic form, the sporotrichum follows the lymphatic channels, in which it remains localized. In the disseminated form, with multiple lesions, a gumma of haematogenous origin may invade the lymphatics of a limb, and set up a secondary ascending lymphangitis. A healthy vigorous man seems most often to escape the infection. Individuals whose constitutions are below par are more susceptible to the mycosis. Most of the patients have been convalescents, overworked or cachectic subjects.

Symptomatology.

We know that sporotrichosis is far from being a malady of the skin alone. It effects the subcutaneous tissue, the corium, and sometimes the epidermis. It may involve the mucous membrane, the eye, bone, the articulations, synovial membranes, testicles, abdominal viscera, et cetera. This multiplicity of forms and

lésions shows conclusively that sporotrichosis lies not only in the domain of the dermatologist, but in that of the physician, the surgeon, the laryngologist, the ophthalmologist et cetera. The most frequent varieties of sporotrichosis seen are:

1. Disseminated gummatous sporotrichosis of De Buermann and Ramond.

In this variety the onset is insidious. The first gummata are practically always discovered by accident. Their number varies, may range from 4-35 or may exceed 100. The first gumma takes its origin at any point of the subcutaneous tissue. The gummata are scattered without any systematic arrangement or selective localization over the whole body. Any region of the body may be involved—but the head, the scalp and the extremities are often free or show very few lesions in comparison with the trunk. Each gummatous nodule has an autonomous evolution which is the same for all. At first it is a little rounded mass, hard, elastic, painless and movable in the subcutaneous tissue. This gradually softens and in four to six weeks terminates in a characteristic cold abscess. When liquefaction occurs the fluid which at first is transparent, viscous, gummy, with purulent streaks, later becomes opaque, thick and decidedly purulent. When its fluids contents are evacuated, there remains around the empty pocket a persistent indurated ring. These fluctuating masses or abscesses as they are called, do not tend to rupture spontaneously, nor to grow in size; and they do not disturb the general health. This stationary condition, preceded by a stage of rapid growth is quite characteristic. New lesions, however, continue to appear, have the same evolution as the first, and pass into suppurating lesions. Adenopathies may occur; but of the few cases reported only a limited number showed this condition. In the case to be reported cervical and axillary adenopathy came late in the disease.

2. Disseminated subcutaneous gummatous sporotrichosis with ulceration (De Buermann and Cougerout).

In this variety of the disease the subcutaneous gumma, after having passed thru the phases just described, become hypodermidemic and destroys the skin by ulceration. The

ulcerations are decidedly varied in appearances. As a rule they are tuberculous in appearance. At times the ulceration is nothing more than a narrow fistula from which oozes a viscid, colourless or at times reddish pus or yellowish fluid. The edges of the fistula are violaceous, loose and irregular, thin or at times swollen. A common variety is the ecthymatous or rupial form of ulceration. These lesions resemble a coccal ecthyma or certain varieties of tertiary syphilis or the ulceration of early malignant syphilis. Adenopathies may occur. Neglected sporotrichotic lesions linger for months, and even years. Spontaneous healing is very slow. The cicatrices may resemble tuberculous scars, with a thickened and cheloidal centre or they may look like syphilitic scars, fine smooth, and



Sporotrichotic adenitis with ulceration.

polycyclic, or surrounded by satellites of pigmented scar tissue. In most cases they have a special appearance. They are narrow, irregular, linear, or stellate. A large areola, which is at first brownish-violet in color, a little later becoming distinctly brownish, surrounds the cicatrix and for months persists.

Local pain is exceptional, usually there is a little stiffness or sense of fatigue in the limb affected. The general health which is good

at first, alters as the disease progresses. The patient becomes pale and loses flesh, but he does not give up work. One can readily see the mixture of lesions of different appearances, which is one of the diagnostic points in the recognition of sporotrichosis.

3. A mixed form of sporotrichosis may be encountered.

When the disease has existed for a long time it presents as a rule a complete clinical picture. Side by side we meet with lesions of different age, different tendencies, and different appearances; tuberculous looking, syphilitic looking, ecthymatous, rupial and furuncular. We may find lesions of the lymphatics, lesions of the dermis, epidermis, mucous membrane, muscles, osseous tissue et cetera, papules, vesicles, vesico-pustules, pustules may be encountered, lesions resembling tuberculous lupus or even kerion, secondarily due to the pus cocci, folliculitis, acneiform lesions, eczematous or pityriasis patches may be noticed. Whatever be the situation, its size or its tendency, the "gumma" remains as the fundamental lesion and this constitutes the unifying factor between the different forms of the mycosis.

4. Localized sporotrichosis; sporotrichotic chancre; lymphatic sporotrichosis; sporotrichotic adenitis.

In this form the sporotrichum penetrates by a cutaneous lesion at the site of which it produces an initial lesion which is called the "sporotrichotic chancre." Then the lymphatics become involved and we find a hard lymphatic cord stubbed with gummata identical with those of disseminated sporotrichosis. The lymphatic glands of the region may or may not be enlarged. The disease remains localized to the region primarily affected. As a rule the chancre can be found, but it may remain undiscovered and only the lymphangitis seen with or without the enlargement of the neighboring lymphatic glands. At times only the chancre and the enlarged lymphatic glands are seen with no involvement of the lymphatics. Three cases of sporotrichosis of the eye have been reported. Two by De Buermann and recently by Wilder and McCollough.

The Diagnosis of Sporotrichosis.

Clinical Diagnosis.—Sporotrichosis imitates many affections and for that reason is

at times difficult to make a clinical diagnosis. The gummatous disseminated, non-ulcerating variety resembles syphilis, tuberculosis, leprosy. The disseminated gummatous ulcerating variety resembles tuberculosis. The chancre and the sporotrichotic lymphangitis resemble tuberculosis, syphilis, eczema and even glanders.

Below are the characters which permit us to recognize the manifestations of sporotrichosis.

1. The large number of lesions, in contrast with the preservation of the good general health of the patient.
2. Partial cup-shaped softening of a node, at first indurated then with a breaking down in the centre of the lesion.
3. Slight ulceration only, unless secondarily involved.
4. Irregular, violaceous edges, nearly always undermined.
5. The small area of ulceration in contrast to the size of the gumma.
6. The co-existence of several contiguous ulcerations, separated by a narrow bridge of violaceous skin over the same gumma.
7. Viscous pus or a lemon yellow serous discharge.
8. Indolent evolution.
9. The cicatrization of the skin.
10. Smooth elastic cicatrices with irregular edges, surrounded by a brown pigmented area.
11. The constant absence of enlarged glands.

If a patient presents the above symptoms and recovers rapidly under iodine treatment, local and general, the diagnosis is almost certain. However, the bacteriological diagnosis should always be made.

Bacteriological Diagnosis.—While direct examination for the parasites in the pus removed for biopsy may seem easy, it is very difficult and tedious, for, as a rule, the parasites are scarce and when one discovers the short oblong forms which they assume in vivo, one has difficulty in distinguishing them from the debris of broken down leucocytes, or red blood corpuscles, or degenerated protoplasm. The parasites have no special selective affinities for dyes and they appear as a shadow in comparison with the staining of the rest of the preparation.

However, they can be found and we should at least attempt an examination for them.

Inoculation is another diagnostic procedure. It is made into the peritoneal cavity of the mouse or still better the male white rat, in which a characteristic orchitis develops shortly after the inoculation. In the lesions, the parasite is found very abundantly and can therefore be easily discovered by direct examination and by culture.

Glucose peptone gelatine is the medium used.

After washing the skin with tincture of iodine, the closed lesions are punctured with a glass syringe armed with a long needle and free from all traces of antiseptics. In ulcerated lesions, washing or antiseptics are done away with. The fluids obtained are poured over the surface of three tubes of glucose peptone gelatine. The inoculation should be a copious one. One-half to one cubic centimeter



Sporotrichs.

of the fluid should be put into each of the three tubes. The tubes are left in the temperature of a room, which in winter should be warmed. The incubator should not be employed.

From the fourth to the twelfth or thirteenth day, according to the temperature of the room, the colonies of sporotrichum develop. At first they are white, then brownish, then chocolate-

brown. Their colour and folds are quite characteristic, the folds being analogous to the folding of the cerebral convolutions. The macroscopic appearance is in itself pathognomonic. If one has seen a culture of sporotrichum beaurmanni once, he will be able to recognize it immediately. The sporotrichum as it grows in vitro sends out filamentous, hyaline prolongations over the wall of the tube. This takes place about the third day. After the fourth day there is found a parasitic star, more or less ramified, and corolla-like.

A second technic is the mycotic sero-diagnosis of Widal and Abrami.

This method is not only applicable to the diagnosis of sporotrichosis but also to that of actinomyces, and allied mycoses, hemisporosis, et cetera. It allows one to make an immediate diagnosis the very day the patient is examined, while the culture method requires several days before a conclusion can be reached. It is of especial benefit when the focus of infection is so situated that cultures cannot be taken.

Two techniques can be used:

1. Sporo-agglutination.
2. Mycotic reaction of fixation.

1. The technic of sporo-agglutination is that of Widal's sero-diagnosis of typhoid fever. The only difference is in the preparation of the microbial emulsion, which in this case is a homogenous emulsion of sporotrichum buermanni, filtered so as to contain only free spores. Marked sporo-agglutination confirms the diagnosis. Dilutions of 1:400 to 1:500 should be employed.

2. Mycotic reaction of fixation.

Its general technique is that of all the reaction of fixations of Bordet and Gengon. The only particular point is the preparation of the antigen.

A third technique is that of the sporotrichotic intradermic reaction—Bruno and Block.

A sterilized emulsion of sporotrichum buermanni in physiological saline is used. Two drops of this emulsion are injected into the skin of the forearm. If the patient has sporotrichosis there is, after the twenty-fourth and more commonly the forty-eighth hour a very marked reaction. There will be produced an indurated nodule of at least 5mm. in diameter

with a broad, reddish oedematous areola, measuring 3 to 7 cm. in diameter. A negative reaction will eliminate sporotrichosis. A positive reaction may be gotten in a "carrier" without sporotrichotic lesions. Other mycoses may also give a positive reaction. Therefore this method, while of service, should not be substituted for the sporo-agglutination, the fixation reaction, or the culture method.

Prognosis and Treatment.

The prognosis is as a rule good and under the proper treatment the patients get well, unless of course some complication sets in, such as septicaemia, or unless the sporotrichum has invaded the mucous membrane of the pharynx and the upper air passages. In cachectic individuals from whatever cause, in tuberculosis individuals, and in those patients who are intolerant of the iodides, the prognosis should be guarded.

Potassium iodide is the drug to be given and should be administered internally in increasing doses, as high as six grams a day and even more. The local lesions should be treated with a weak iodo-iodide solution—aquae 500 grams, potassi iodi 10 grams, iodi 1 gram.

The ulcerated points should be cauterized with tincture of iodine.

The general treatment should be continued for a month after apparent complete recovery so as to prevent relapse and recurrences. In patients completely intolerant of the iodides, the succedaneous iododea should be used; the albuminous iodides iodo-maisine, sajodin, et cetera.

Iodine oils, lipiodol, iodipin, et cetera, in intra-muscular injections may also be resorted to.

CASE REPORT.

J. W.; Age 21 yrs.; Single; Nativity—Austria; Occupation—Tailor; Family History—Mother died at the age of 43, probably of tuberculosis; father living and well; two brothers living and well. No brothers dead. One sister died of pneumonia at the age of 6 yrs. One sister living and well. No history of syphilis, gout, rheumatism, or cancer in family.

Previous history: Has never been ill so far as he can remember. Three years ago he had eczema of face, which lasted about two months. Has never had a chancre; denies gonorrhoea.

Present condition, General health fair. Patient an anaemic individual, who has worked indoors practically all of his life. Digestion good. Bowels regular. Urine normal. Heart and lungs normal.

History of the present attack: Began nearly three years ago when patient began to have severe headaches. In about six weeks patient noticed an indurated crusted lesions on the right side of his back. He went to his private physician and received internal treatment. This did him no good and the lesions remained the same for two months. Then an eruption appeared on his body. His physician examined his blood but obtained a negative Wasserman. So sure was he that the lesions were of syphilitic origin that he persuaded the patient to take an injection of neo-salvarsan. After the first injection the patient became covered with an eruption similar to his primary sore. Another injection of neo-salvarsan was advised and given which aggravated the condition. He then consulted a dermatologist who after a year's treatment failed to relieve the man and he was advised to come to the hospital for treatment. As soon as the man was seen all were unanimous in their opinion that the disease was syphilis. A Wasserman was taken and the patient admitted to the hospital. The Wasserman turned out to be negative; but in spite of this we gave him five injections of neo-salvarsan, intra-venously one each week and at the same time gave him mixed treatment. Soon the lesions began to disappear and after the second injection we again took a Wasserman hoping it would be positive; but it was negative. The patient continued to improve and the body which had been a mass of scattered indurated, ulcerating, lesions began to heal with thin cicatrizations and a peculiar areola around them. The scars were certainly syphilitic in appearance as you will notice from the photograph. One lesion in front of the left ear failed to heal. Working on the known fact that a syphilitic lesion which fails to respond to marked anti-syphilitic treatment when its fellow lesions have is no longer syphilitic, we obtained a section of the base and sides of the ulcer, which we examined microscopically. No evidences of any malignant degeneration was found. We continued to give him active

treatment and as a result of the biopsy the ulcer began to heal. But not for long as it soon began to spread and coincident with it's spreading there appeared an enlargement of the glands of the neck and axilla of the left side. A section was taken from the axilla which showed only a hyperplastic lymph gland. Smears were made from the ulcer and the sporotrichum found in the pus. Cultures of the germ grew luxuriantly.

The patient was immediately put on ascending doses of potassium iodide, as much as 90 grains were given three times a day. After a few weeks the sero-diagnosis of Widal was negative and the iodide stopped, yet the ulcer still persisted. However, it showed no sporotrichotic involvement and the supposition that it was malignant was held to. Biopsy, however, showed no malignancy. A 1-2500 bi-chloride of mercury solution was applied and the ulcer began to heal. While the patient was in the hospital he ran a septic temperature, the highest being 103 degrees, with a continued rapid pulse.

PITYRIASIS ROSEA.

By J. Howard King, M. D.,
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To the general practitioner, this name as well as the condition it designates is, for the most part, a total stranger. Not, however, that he so seldom has occasion to use it, but that he fails to recognize it when he does meet it. Being a mild disease in character, and of practically self-limited duration, even if untreated, then why should the family physician bother whether he recognizes it or not? The chief reasons I should say are that he is liable to mistake it for a macular, scaling syphilide on the one hand, or a widespread form of ringworm on the other, the proper treatment being administered for either of the latter, leading to more or less serious consequences.

I have known victims of this mild malady to have received salvarsan. I have known others to be dosed to the limit on Fowler's solution, and painted repeatedly with Tr. Iodine, or rubbed with the ointment of ammoniated mercury until their bodies were

almost totally denuded of a fairly good coat of epithelium from the resultant dermatitis. One miserable fellow I saw not over six months ago, I shall not forget. Unfortunately, he had a relative who was a practicing physician. This relative, I presume, working along the line of the old adage that there are only three classes of skin diseases, viz; one which sulphur will cure, one which iodine will cure, and one which "all hell" can't cure, had first tried him out on a strong sulphur ointment. Failing in this, he then tried him on iodine. Instead of then sticking to his maxim, he persevered, and tried him once more. This time it was glacial acetic acid very poorly diluted and after two applications of this the patient rebelled. It is hardly necessary to state that this patient barely had enough lesions left on which to make a diagnosis, but a few oil dressings and bland lotions made a most grateful friend of him.

These instances with many others that I might mention struck me that this disease is of enough importance to warrant our attention for a short space. That this is a disease of fair frequency all dermatologists agree. Investigating my own practice for the past year, I find I had twelve cases. I have recently seen two others at the Vanderbilt outdoor clinic, and four of my own, making eighteen cases I have seen in the past year.

As early as 1760, this condition was recognized and isolated as a distinct entity by Gibert, a French dermatologist, who so clearly pointed it out as to cause later writers to mention it is the pityriasis of Gibert. *Pityriasis* means scaliness and *rosea*, rosecolored.

Gibert defined it thus: "A mild, superficial, inflammatory, usually self-limited disease, marking the skin occasionally preceded by, or associated with constitutional disturbances, and characterized by rapid appearance of pale reddish, slightly elevated, roundish lesions (the so-called "measles") discrete at first and often confluent later, symmetrically arranged, mostly on the covered parts of the body. These so-called macules are mostly about the size of the thumb nail, or they may be much smaller, or occasionally somewhat larger. They usually develop into brownish or salmon colored plaques, through desquamation of their cen-

tres (giving a characteristic finely wrinkled appearance), and become bordered by a narrow, rosy red zone. Frequently the eruption is preceded a short time by the appearance of a single lesion, which becomes larger than the others, and persists throughout the course of the eruption (this the "primitive plaque" of Brocq).

We now know that this definition does not include all the varieties of the disease, but I give it to present a mental picture to you while we go further into the discussion.

The etiology is still unknown, although many investigators of wide experience have searched diligently to determine it. As a consequence, many theories have been advanced. It's rather close appearance to forms of ring-worms has led to many searches for a parasite. Many have claimed at some time to have found spores of mycelia of this supposed organism, but none were able to fully prove it. Vidal in 1882 found what he took to be it, and for a few years it was accepted, but Koposi showed it to only be a form of an epithelial cell. Szaboky probably did more work along that line than any one else. He thoroughly examined scales, tried to cultivate organisms on various special media and attempted animal as well as human inoculation in 119 cases without success. The histo-pathological changes as described by Jaresch, Unna, Hollmaun, Lowenbach, Sabrand, Towle and others, do not support the idea that there is a causative parasite locally,—Jaumes, Borchard, Fewland Weiss and Crocker remark upon the frequent coincidence of pityriasis rosea and gastric disturbances.

That systemic disturbances do occur in the disease most authors concede. It has been urged by some who consider the course of the disease not unlike syphilis that constitutional symptoms do precede the eruption and at the time of the examination are not evident.

Zeissler, Crocker, Fox and Fordyce, have reported the disease as occurring in two or more cases in the same family. I have seen it in husband and wife, also mother and child, but the great majority of cases are entirely sporadic. It probably occurs as to season, more in spring and fall, but may occur any month in the year. It rarely occurs in old age, but is a disease of youth and young

adult life. It occurs oftener in blondes than in brunettes. Lessor, Hutchinson and Kroucayer who regard the affection as incident to extraneous causes would incriminate unclean underclothes kept in poorly ventilated rooms, but this, too, will not hold good. W. D. Owens of the U. S. Navy writing in the *Jr. Cut. Dis.* in May, 1914, advances the theory that it is an erythematous disease in a way akin to erythema or urticaria, purpura, et cetera, following the investigations of Bruck, Gilchrist and others, who offer as explanation for a cause, a poison acting on the vessel wall and surrounding tissues, which poisons are foreign proteins acting upon the living cells, and tending to produce a hypersensitiveness of the organism known as anaphylaxis. He reports twenty-nine cases, and found tonsillitis the paramount condition associated with the eruption. Anyhow, the actual cause is not established. The histo-pathological changes as described by Unna, Towle and others, is in the epidermis only mild, as moderate parakeratosis and acanthosis with intercellular oedema and while in the upper corium there are rather extensive changes in the way of perivascular cell infiltration in the papillae, which grow more marked in the later stages. Saborand in many cases found minute subcorneal vesicles situated about the margin of the lesion, resembling those seen by Unna in eczema. Phagocytes were not found in these vesicles, from which fact he reasons that the disease is not parasitic.

The blood findings in pityriasis rosea are similar to those in diseases of the skin in general, viz: a slight eosinophilia, a lymphocytosis but otherwise normal.

As stated in Gibert's definition, this disease may be ushered in by slight constitutional symptoms as slight malaise, slight elevation of temperature, and sometimes slight tonsillitis. By far the majority of cases do not show this. There first appears usually somewhere about the trunk the herald patch which usually precedes the eruption by about two weeks, or less time, and remains throughout the attack, generally being the largest lesion, and as a rule distinguishable to the end.

The general eruption then comes out rather suddenly requiring only two or three days. These lesions are as a rule about thumb

nail size, but some are usually the size of a dollar, while many are macules the size of a split wheat grain. The lesions as a rule, are discrete, but smaller ones often coalesce to form single larger ones, or may form one immense gyrate lesion, covering one whole axillary space, or shoulder blade, looking very much like a large circinate ringworm. The lesions all tend to an ovoidal shape with their long axis running with the lines of the skin, and against the long axis of the body. The lesion shows an early tendency to slight desquamation in the center causing it to have a fawn, or salmon colored tint in contrast to the rose colored areola about the periphery. This also causes the bulk of the lesion to show a withered appearance like a crinkled cigarette paper and the margin shows a broken epithelial edge often spoken of as the epithelial cuff. The eruption shows a marked predilection for the trunk, neck, and shoulders and more especially the anterior axillary and pectoral regions also the groins. It distinctly avoids the extremities, face and scalp, especially the legs, forearms and scalp. It never invades the hands, feet or scalp. As a rule, there is slight burning and some itching, enough to be quite discomforting at times.

The diagnosis is to be made from seborrhoeic eczema, syphilis, and ringworm. Occasionally it may simulate a drug rash as from copaiba. Psoriasis might possibly be mistaken for it, but rarely.

Seborrhoeal eczema differs in that its development is slow and gradual, with no herald lesion and chiefly that its beginning and base is in the scalp, and eyebrows. Its lesions on very close inspection never have the characteristics of the pityriasis lesion, one rarely so symmetrical is usually covered with a greasy scale, and one more elevated.

Psoriasis comes on slowly, has more profuse scaling, silvery, and dry, is thicker and more inflammatory, has a more sharply defined edge, often invades the scalp, knees and elbows, legs and forearms, and the lesions are more irregular. It is also very chronic in its course.

Ringworm is not so widely distributed, shows no symmetry, spreads peripherally the ring shape is more distinct, there is more evidence of decided central clearing and more de-

cided actively at the border, often showing papules or vesico-papules and a more abrupt edge. Ringworm also often affects the hands, face or legs. Lastly, scrapings from the edge will show spores and mycelia.

Syphilis—It is the maculo-papular syphiloderm which causes confusion, especially if scaly. Its lesions are thicker as a rule, showing more infiltration, more of the decided papular element instead of plaques, have not the cigarette paper crinkling, or the epithelial cuff, have a darker more violaceous hue, are not unusual on the face, forearms, wrist and palms, have lastly the associated mucous lesions, the polyadenitis, and history or remaining evidence of the primary sore.

Drug rashes are as a rule more finely macular, more disseminated with less intervening good skin, and show none of the characteristic pityriasis lesions as above described.

Pityriasis rosea is in the great majority of cases limited to a duration of six to eight weeks, and you are fairly safe in thus limiting your prognosis. George Henry Fox, writing in *Jr. A. M. A.*, August 7th, 1912, cites several instances of its duration lasting six months to a year, or even longer in spite of treatment. He offers this as evidence against local parasitic origin.

The treatment should be bland and non-irritating unless you can see the patient as often as you request. A mild calomine and zinc oxide lotion with 1-2 to 1 per cent phenol is very satisfactory, especially if there is any irritation. When there is little irritation and scratching, the application of Condyl's fluid which is almost a saturated solution of sodium and Potassium Permanganate is about the best. Many claim that this shortens the duration of the attack.

Bulkley claims to have great success with a solution of bichloride 1 to 300 carefully applied every day. This, I know to be very good, especially when interspersed with a bland lotion. I would hesitate to use these strong solutions on a child.

Internal drugs are of little use.

AUTOGENOUS SERUM IN CERTAIN DISEASES OF THE SKIN.

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We hail with delight any advance in the therapy of diseases of the skin, and especially toward the group of diseases to be discussed in this paper since it embraces some of the most difficult to treat successfully.

Chronic psoriasis, lichen planus, dermatitis herpetiformis, pemphigus, pruritus, hydroa-aestivale, chronic urticaria, prurigo, chronic eczema, and chronic X-ray burn are the diseases which have been beneficially and most successfully treated with autogenous serum.

The technique is as follows: 50cc to 100cc of blood is drawn from a vein with a large needle into a centrifuge tube; when the clot has formed, it is broken up with a glass rod and the blood centrifuged for 20 or 30 minutes at the rate of 4,000 or 5,000 per minute in an electric centrifuge. The serum is then collected in a large glass syringe and injected intravenously. About one hour is required for the preparation and administration and the patient goes about his duties, as there is no reaction nor discomfort following the treatment. Only one case has been reported in which serum-sickness followed after the fourth injection and the treatment was discontinued. This was in a case of chronic X-ray burn.

The injections are given weekly and in doses from 20cc to 40cc of the serum, beginning with smaller doses and gradually increasing until three to six or even more doses have been given, observing strict aseptic measures. The serum should be greenish-yellow in color, but if it should be blood tinged it may be used with equal safety. The presence of chyle if bled too soon after food may give it an opaque appearance, but will not diminish its effect. Complete coagulation should be insisted upon.

To emphasize the influence of autogenous serum I will briefly describe the behavior of a case of chronic psoriasis when thus treated. Nearly all chronic cases of psoriasis have been treated with chrysarobin of varying

strength without success. Some improvement takes place, but the patient continues to have some patches regardless of all local and internal treatment. When serum has been given for three or six times in such a case then local application of a 2% chrysarobin ointment make the obstinate patches clear up within a few days. This is the unanimous report from those who have used the treatment. While psoriasis and eczema must have local treatment in addition to the serum, the other diseases mentioned above are relieved by the serum treatment alone.

The therapeutics of this procedure is the interesting question. Why are these chronic conditions which have resisted every other means of treatment relieved by a few injections of so simple an agent as blood serum? The answer is shrouded in ignorance. There is no definite explanation. The fresh blood is drawn and allowed to clot, thus it is defibrinated. The new bio-chemical compounds which act therapeutically are probably formed during the clotting process. New ferments may be formed during the clotting period. If this fresh serum is inactivated the useful compounds are destroyed, for if such serum is injected, urticaria is produced instead of it being relieved. What influence or action the autogenous serum has when injected into the blood stream cannot now be explained. We do know, however, that in psoriasis such a change has been wrought in the body that a very mild local treatment will cure the patient, whereas previous to the administration of serum no manner of local treatment would effect relief. The skin is more responsive to the action of chrysarobin. We do not know what takes place in the blood and serum after it is drawn. We do not know how this fresh serum when re-injected acts upon the serum of the blood, and restores it to a normal condition. In some of these diseases the restoration of the blood alone is sufficient to cure the condition. If physiological chemistry was only developed to such a point as to enable us to detect these changes, how gratifying it would be. If we could detect the toxins responsible for these diseases just as we can find with the microscope the micro-organisms of other diseases,

we would have a solution of this question.

Case Report.—Mrs. H., age 24, housewife. Has had urticaria eight months, extensive and constant. Patient was extremely nervous when first seen, February 1, 1915, on account of the irritation. Had lost weight. Otherwise patient was well, except constipation. Diet, calcium lactate, alkalis, Carlsbad salts and nerve sedatives were used with some improvement. After six weeks' treatment I decided to use autogenous serum. Six injections given at weekly intervals with almost complete relief.

Since preparing this paper I have treated another case of chronic urticaria with marked relief.

The cause for these diseases, and in urticaria most manifestly, exists no doubt in some change in the constituents of the serum of the blood, brought about by the ingestion of a foreign nitrogenous compound, and sometimes, for instance, this foreign compound or exciting element may come from the albumin of egg, which may be demonstrated by vaccinating the patient with egg-albumin and producing the urticarial eruption. The majority of cases of urticaria will readjust themselves, but the chronic case must have the aid rendered by autogenous serum or other human serum in some cases to correct, in whatever manner it may—empirically to us now—the faulty processes going on in the blood serum.

A sufficient number of cases of the diseases named above have been now treated with such improvement as to justify its use when indicated. The literature is brief, but encouraging.

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THE MOST USED AND ABUSED MUSCLE OF THE HUMAN BODY.*

By Archibald Cary Lewis, M.D.,
Memphis, Tenn.

Unless you have pretty well forgotten the anatomy and physiology of the human eye you have already recognized the ciliary muscle as the one referred to above. In order to better appreciate the work of this over-worked muscle, a brief review of its anatomy and anatomical relations is in order at this point.

Situated just behind and concealed by the periphery of the iris is the ciliary body. The iris, in fact, springs from the anterior surface of the ciliary body and is also nourished and controlled by it. The ciliary body is composed of two distinct parts: an outer muscular—the ciliary muscle, and an inner vascular—the ciliary processes. We will confine our observations to the former.

The ciliary muscle is made up of three sets of fibres. From without in are the longitudinal, or meridional fibres; next the radial, and lastly, the circular portion. The form of the ciliary muscle depends upon the grade of development of the circular portion. In the myope this part of the muscle is very poorly developed, while in the hypermetropic type it is very strongly developed.

The ciliary muscle is connected with the capsule of the crystalline lens by the suspensory ligament, or zonula ciliaris. The sole function of this muscle is that of accommodation, and for this reason it is generally spoken of as “the muscle of accommodation.” As you know, the lens of the eye is the most potent factor in focusing rays of light, (parallel, convergent or divergent) upon the retina of the eye, a condition highly essential to the production of a clear image. Change in the convergent power of the lens is produced by contraction of the ciliary muscle, which relaxes the suspensory ligament, thereby allowing the lens to increase in thickness and convexity. This change is the accommodation, which is alternately thrown into a

state of tension and relaxation, so that the optical adjustment of the eyes is altered.

These changes are constantly taking place during our wakeful hours and enable us to see clearly an object at 200 feet, 20 feet, 5 feet or 1 foot; however, each distance means a change of accommodation for the ciliary muscle.

Consider for a moment the mechanical perfection of this wonderful accommodative apparatus, which with lightning-like speed and absolute precision focuses the parallel rays from the distant object, the divergent rays from the intermediate object, and the very divergent rays from the object close at hand; in each case forming a clear and distinct picture upon the macula lutea.

Other alterations in the ocular apparatus accompany the contraction of the ciliary muscle and the lenticular change. The choroid is drawn forward by the contraction of the tensor choroidae fibres; the pupil at the same time becomes narrow and the internal rectus muscle draws the eye inward so that a proper relation between convergence and accommodation is secured.

An enormous quantity of work is required of the ciliary muscle in the normal (emmetropic) eye, especially so in those eyes whose duties consist largely of close work, reading, writing, sewing, etc. This can be comfortably handled so long as youth and good health remains. In the ametropic eye, however, where refractive errors exist, particularly hypermetropia and astigmatism, the work of these muscles is immeasurably increased and the symptoms of overwork and eye strain manifest themselves.

Of course, these errors of refraction can be corrected by proper refracting lenses, properly prescribed. At least fifty per cent of eyeglass users, however, are trying to wear correcting lenses that do not properly correct, but often put additional work on these already overworked muscles.

Work is more exhausting for the eyes the nearer it is brought to them. The accommodation is completely relaxed when we gaze into the distance, hence exhaustion is then impossible.

Only the eyes of the young suffer from eye-strain or ciliary exhaustion. The lenses are

*Read at meeting of West Tennessee Medical and Surgical Association, May, 1915.

then very elastic and the power of accommodation high. The presbyope has little lenticular elasticity, therefore slight accommodative power. Hence the presbyope can work even at his near point without fatigue. Presbyopia is not a disease, but a physiological process which every eye undergoes. It begins about the fortieth and is complete near the sixtieth year of life. This varies, however, according to the variety of the refractive error, being earlier in the hypermetropic type and later in the myope. At this stage of life the much-used and abused ciliary muscles begin to enjoy a well-earned rest and shift all the heavy work upon the inexhaustible power of spectacle lenses.

Let us consider for a moment the effects of eyestrain or abuse of the ciliary muscles. These are not limited to the eye itself, such as ocular fatigue, ocular pain, palpebral irritation, lachrymation, photophobia, the blurring of objects, etc. The effects of eyestrain are both immediate and remote and produce a variety of nervous and digestive disturbances. This is brought about through the irritation of the central nervous system by the overexertion of the muscles of accommodation, and constantly produces headache, nervous irritability, nervous depression, nausea, malaise and vertigo. More headaches are, in my opinion, due to eyestrain than to all other causes combined. The far-reaching effects of eyestrain are also manifested in the digestive organs. So often have I seen chronic gastric disturbances, malaise and constipation disappear promptly and permanently after correcting refractive errors that I now almost promise the sufferer to relieve him of these troubles with a simple pair of eyeglasses.

The high degrees of ametropia are not the ones that cause the most trouble. A small astigmatism can be overcome by the action of the ciliary muscle and owing to the inherent desire of the cerebral optical centres to receive the most perfect impression possible at all times, this muscle is kept on a constant strain to control this astigmatism. On the other hand, where the astigmatism is large, it cannot be corrected by the efforts of the muscle of accommodation and a perfect image cannot be obtained by the retina, hence no effort is made and no eyestrain results.

The patient frequently asks the oculist, "Why is it necessary to dilate my pupils to examine my eyes for glasses?" The oculist, and the oculist only, realizes the importance, nay, the necessity of this. However, dilation of the pupils is not the object aimed at, but only coincidental to it. It so happens that all of our cycloplegics (atropine, homatropine and scopolamine) are midriatics also, so that in acquiring cycloplegia (paralysis of the ciliary muscle) we obtain midriasis also. We must have the exact refraction power of the eye without accommodation. "That the eyes are never used without accommodation is no argument against the necessity of our knowing how much excessive ciliary activity enters into distant vision, or how much is suppressed in near vision. The knowledge of these activities is an essential part of our successful refraction work. Nothing gives this save cycloplegia." (Woods.)

Complete cycloplegia is not always easily acquired. While in the average case only an hour or two is required to get the ciliary muscles under control, we frequently find a case that requires days and occasionally weeks. These rebellious muscles are cases of ciliary spasm, or spasm of accommodation, and are caused by over-exertion. In such cases it is impossible to even approximate a correct prescription for glasses without first obtaining complete cycloplegia. This trouble is found only in young persons and most frequently in myopia. It always makes the eye appear either myopic or less hypermetropic than it really is. The difficulties encountered in ciliary spasm are clearly illustrated in the following case:

On February 26, 1915, a boy of twelve years was brought to me by an optician with this history. Has worn glasses constantly since he was six years old; eyes have always been weak and has been handicapped in his studies. The optician stated that he and another optician have been working on the case for a year, during which time they have changed his glasses a number of times. Four months ago when he put the lenses on the boy he is now wearing they brought his distant vision up to 20-20 (normal) in each eye. Vision now reduced to 20-80 or 1-4 normal. Can't see to read at all. Now please note carefully

what these lenses were : 275 sph. with 4.00 cyl. axis, 90 on each eye. After using homatropine for one hour 2-3 of this error disappeared and his vision equalled 2-5, but the result was unsatisfactory, so I prescribed 10% atropine t. i. d. for 3 days. At the end of that time the mixed astigmatism had entirely disappeared and a compound hypermetropic astigmatism had taken its place with no improvement in vision. The atropine was continued for three weeks, during which time I refracted him every few days, eight times altogether, with a different result each time up to the seventh. He then accepted, Right —1.50 cyl. axis 90—Left—1.75 cyl. axis 90 with 20-30 vision in each eye. Three days more of atropine producing no further change I decided that the ciliary spasm was conquered and prescribed the latter correction. He has worn it now for nearly two months with comfort and has normal reading vision again.

Of course, this was an unusually stubborn case of ciliary spasm, but we daily encounter cases of less magnitude. You can readily understand how necessary cycloplegia is in such cases and how impossible it is to approximate a correct prescription for lenses without it. It is in fact almost criminal to put glasses on children, with their extremely active muscles of accommodation, without the employment of a cycloplegic. The importance of this decreases as the age of the individual increases and the elasticity of the lenses diminishes.

I make it a rule to employ a cycloplegic in all cases under 45 years and often find it necessary to use it in cases five and ten years older. Only a few days ago I refracted a man 53 years old with such spastic accommodation that I was unable to prescribe lenses for him with any certain accuracy without cycloplegia, but he was leaving the city at once and for lack of time it had to be done. He left with a prescription not wholly satisfactory to me and it may not prove so to him.

Another case of ciliary muscle abuse, and this in a medical student who should have known better, suggests itself to my mind. He came to me, three weeks after having glasses fitted by an optician, with a well developed case of optic neuritis and a small hemorrhage at the macula of his right eye. By paralyzing his accommodation I found that he had a

hypermetropic astigmatia, for which he was wearing a myopic astigmatia correction. This, of course, increased rather than removed his eyestrain and produced a pathological condition which will always remain with him.

I do not mean to criticize or condemn the optician, who does the best he can, and perhaps the best any can, without obtaining static-refraction. These cases are cited only to demonstrate the necessity of complete cycloplegia in refraction and the danger attending its non-use.

We who are in the position to observe these things are also in a position to understand why the ciliary muscle is the most used and abused muscle of the human body.

TRACHOMA—A PUBLIC HEALTH PROBLEM.*

By F. J. O'Connor, A.B., M.D.,
Jackson, Tenn.

Trachoma is a disease of great antiquity, yet it receives and should receive the attention of much effort in the cause of its prevention, treatment and eradication.

Trachoma, a word derived from the Greek word "trachus," meaning rough, well describes the condition of the upper lid, sometimes the cornea and even the vigorous treatment often employed. The disease first attracted attention about the first of the last century by its appearance among the European armies, thought to have been introduced into Europe by Napoleon's soldiers, hence it is termed by old authors "Egyptian or Military Ophthalmia;" however, further research has shown that the disease had been endemic in Europe since the earliest historical period. Ebus Papapirus mentions it and in a hippocratic manuscript of doubtful origin it is described.

Celsus describes very minutely the purulent discharge of conjunctival conditions of the upper lid.

During the Napoleonic period, 1815-1840, as many as 30,000 soldiers in a single army

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were affected, as large a ratio as one in five soldiers being infected. Due to the advice of a famous Berlin ophthalmologist the soldiers having trachoma were immediately discharged, disseminating trachoma throughout Europe.

In ancient times trachoma ran a very acute course, attended with copious secretion, this favoring very materially the spread of the disease. In Egypt it often assumes the acute form; however, recent research has shown that the acute form is commonly due to a double infection; i. e., trachoma bodies and either the gonococcus or the Kocks-Weeks' Bacillus. In Egypt these different infections have been classed as trachoma, hence trachoma had the repute of always being acute in that country.

Trachoma, I hold, is an essentially chronic disease in its process and very slow in its onset; that the acute exacerbations are due to a mixed infection. The necessity for this disease being guarded against and frequent examinations being made of all inmates of institutions where many persons are thrown in close contact is evident from the above incomplete review of its rapid spread over Europe after the Napoleonic wars.

Trachoma is increasing in its incidence in this country. Among the slums of the great Eastern cities, the disease is always present. Recent work by Stucky and Muller, under the auspices of the United States Marine Hospital Service, has shown that the disease is increasing very rapidly in this country. Stucky's paper, read before members of the Ophthalmology Section of A. M. A., June 22, 1913, at Minneapolis, Minn., contained abundant evidence of the wide distribution and rapid disastrous course the disease had made in the mountains of our neighboring state of Kentucky. In fact, it is attacking the last remnants of that class which blazed the tracks of civilization across the mountains to the "Bloody Hunting Grounds" of Kentucky and Tennessee. The clinics, in tents and such buildings as they can procure, are overrun with the numbers who come to be treated. The disease spreads rapidly in insane asylums, barracks, armies, schools and anywhere people in numbers are brought in close contact.

I desire to impress upon you the great

necessity of our having school inspection, not only to detect errors of refraction, enlarged tonsils, etc., but to prevent the spread of this slow, insidious enemy, which strikes in the dark. Recent examinations of school children in the East has disclosed the fact that many who had not known that they had any eye disease were found to be afflicted with trachoma, a means of spreading the disease to unsuspecting persons.

This disease, if treated in its incipency, is curable, hence the crying need for our ever being on the watch for it. The diagnosis in typical cases is comparatively easy. Upon eversion of the upper lid, the pathognomonic trachoma granules are found.

In New York recently an investigation showed that many cases which had been excluded from the school as trachoma were only follicular conjunctivitis. It was also found that the expulsion from schools of trachomatous children resulted in their playing in the parks, playgrounds and streets with non-trachomatous children, with consequent spread of the disease; hence the Board of Health is allowing children with trachoma to attend school, but requiring that they be segregated, using separate rooms and playgrounds.

King, in Public Health Reports, gives the result of his investigations in Porto Rico. Among the 4,000 school children of the Island he found 95 per cent had trachoma and 5 per cent suspicious. He thinks 95 per cent a fair average among the schools of the Island, which would show that among an enrollment of 182,766 pupils during the last school year of 1914, 17,435 have trachoma, to say nothing of 10,000 suspicious cases. Trachoma, as the investigations of the United States Health Service widens its territory of search, is being found prevalent in the United States in territory little suspected previously.

The affection is yearly becoming a more insistent public health problem, which, by reason of our lack of definite knowledge, presents many serious difficulties.

While the studies of Grief and Clausea seem to have led up to the cause of trachoma, Halberstadter and Prowazek succeeded in finding the specific cause, after inoculations upon anthropoid apes, yet we have no definite infor-

mation as to its exact etiology, but we know it to be contagious; however, the mode of transmission and duration of the contagious stage is not fully known.

The diagnosis is not always easy—as in an incipient case, with no drooping of the upper lid, no pannus, just a slight granular condition of the upper lid.

Williams and his co-workers on the New York City Board of Health even deny that it is a clinical entity at all. In a report of a survey of the school children of the Eastside, supposedly a hot bed of the disease, they express skepticism of the diagnosis, and report the discovery of but few cases of the disease. He places emphasis on its being insect borne.

Personal hygiene is the essential means of preventing its spread. Teaching the adults and children to have individual towels, wash basins, bed linens and handkerchiefs are some of the measures we physicians need to urge upon the public.

For the proper treatment of all cases, both the incipient and the long standing cases—to secure this treatment of all cases—inspection of school children is necessary; hence no case of sore or slightly reddened eyes should be neglected as only a cold.

The trachomatous can be segregated in special schools or rooms where the disease is endemic, and while this method would meet resistance and occasion some inconvenience and problems, the opposition to inspection might be overcome with tact and education of the public.

The exclusion of trachomatous students from school is liable to cause the spread of the disease, hence the exclusion might be limited to those in the stage of secretion, and these kept under observation. To keep these cases under observation a free eye clinic is necessary.

The subject of trachoma as a public health problem presents many pitfalls to the sanitarian. These cases are commonly termed contagious in the acute stage, but many observers class the acute stage as mixed infection, the acute infection being due to a second invader. The laboratory must give us a fuller knowledge of the causative agent, its mode of transmission and proper treatment before we can intelligently outline a prophylaxis

which will be really effective; nevertheless, let not this deter us from exerting every effort to eradicate this disease.

While locally the problem is not acute or serious, the disease is endemic in contagious areas—Kentucky, Virginia and West Virginia. In view of the fact that all of the probable foci or centers of endemic infection have not been thoroughly investigated, no accurate estimate of the extent of the area of this country infected with trachoma can be reached. Nevertheless, it behooves to agitate before the public the crying need of school inspection, that we may disclose the incipient trachoma cases, give them timely and proper treatment, thereby employing the best means we have at our command for preventing the disease becoming endemic locally.

On the Eastside of New York a special ophthalmia school has been furnished for the treatment of trachomatous pupils—children formerly excluded are now transferred to this school clinic without delay. The marked cases of folliculitis are treated at the clinic one or more times per week, chiefly with bichloride of mercury rubbings.

The children retained in the special classes are treated according to prescribed directions of the clinic doctor, twice per day by special nurse.

Medication is given at the school under trained hands instead of at home under unskilled, careless management. The children are taught the value of cleanliness and are requested to keep their hands and nails clean, not to rub their eyes with their hands, coats or caps. All rooms, corridors and stairs are mopped daily. The toilets, balusters, side walls up six feet, desks and chairs are wiped down with disinfectant daily.

I give a brief description of the school to impress upon you the need of great care in examining all apparently simple cases of ophthalmia, as a simple case may be incipient trachoma.

Let us exert ourselves, so we may not be forced at some future date to construct and maintain a school clinic because in past years we have failed to institute measures to prevent this and other acute eye diseases spreading.

While it is true we have very few immi-

grants, yet we are in close communication with sections of this city where native trachoma is endemic.

My purpose in offering such a paper on this topic is not an attempt to offer anything new, but that I might cause some one to be somewhat more careful in examining all patients where there is any hyperemia of the lids. Given a case of enlarged granular elevations on the upper lid, lower lid smooth, the presence of slight haziness of upper segment of the cornea, you are fairly safe in diagnosing trachoma. The pannus is the essential differentiating diagnostic symptom. Any case of hypermia of the lids with haziness beginning, affecting only the upper border of the cornea, should be regarded with suspicion.

The question of the prophylaxis of trachoma may be briefly summarized as consisting of an efficient inspection in schools for all lid troubles and reporting such cases promptly for early efficient therapy.

In adults the problem is a serious sociological one, hence more difficult. It is especially difficult among males, as the time necessary for treatment a man may be poorly spared from employment.

A system of home instruction in hygienic measures and therapy might be inaugurated in adult cases. Unhygienic living conditions and poverty seem to be strong contributing factors in the production of trachoma, hence cleanliness and inspection are our chief measures of meeting trachoma as a public health menace.

AN UNUSUAL CASE OF BICHLORIDE POISONING FROM LOCAL AB- SORPTION.

By H. P. Larimore, M.D.,
Chattanooga, Tenn.

A white woman, age 30, weight 120 pounds, married, mother of four children, youngest of whom is two years of age; on October 7, 1915, in an effort to prevent conception, pulverized one bichloride tablet and inserted same into the vagina. This tablet contained 7 3-10 grains of corrosive sublimate. When seen on the next day (October 8,) the labia were quite consid-

erably swollen, and, when separated, presented an appearance of having been cooked. This dark gray, diphtheroidal appearance completely covered the vaginal tract, the vaginal vault and cervix. The burn seemed deeper in Douglas' culdesac than at the vulvar opening. The meatus was swollen, extruding and ulcerated. There was no great complaint of pain or burning, but rather a feeling that the uterus was prolapsed and trying to extrude.

The history of case as symptoms developed is as follows: On second day after use of the tablet, the gums of lower front teeth became discolored, necrotic and receded from teeth. By the fourth day, the inner surfaces of lips, sides of mouth, edges of tongue and throat were covered with a grayish necrosis—an appearance strikingly similar to a bad syphilitic mouth and throat. The breath was fetid.

Hemorrhages from the bowels began on the seventh day, were copious and frequent, but without tenesmus until the last day. The single movement on this day was a most offensive yellow-colored stool, indicating a cessation of the bleeding and the beginning passage of necrotic intestinal mucosa. The bowels were not at any time tympanitic, nor were the abdominal walls other than soft and yielding. No rise of temperature noted at any time.

On the second day the eyelids and face became puffed, and a diminution in excretion of urine was noted. Four ounces were drawn by catheter on the eighth day, eight ounces on the ninth day, an indefinite small amount on the tenth day, and a total of ten ounces on the eleventh and on the twelfth day, when death occurred. There were no convulsions, and always an entire consciousness. During the two last days a slight feeling of stupor existed, but patient could be easily aroused and would remain awake for considerable periods. Swelling of eyelids subsided, leaving extensive darkened hemorrhagic areolae over both orbital cavities. A striking condition was noted in that both conjunctivae showed quite extensive hemorrhagic areas. This we considered of grave prognostic value, showing a weakened condition of the entire vascular system.

Intense nausea and vomiting persisted from the second to eighth day, after which time patient took quite freely of ice, water and milk. Pulse throughout was fairly good, ranging

from 80 to 100. Four hours before death, pulse was 86, with systolic pressure of 95, respiration 14.

The odor during last four days was most offensive. Color of skin and mucosa of mouth became a pearly white, due partly to the bowel hemorrhages, and partly to the effect of the bichloride in diminishing the red corpuscles.

From the appearance of the mouth and throat, the natural assumption would be that the entire gastro-intestinal tract was likewise affected. But these diphtheroidal, necrotic patches in such cases seem to be present chiefly in the large intestine and rectum, according to Klemperer, and resemble closely the histologic changes as found in acute dysentery.

The urinary findings in this case indicate that we had likely an acute diffuse nephritis to deal with. While this patient took freely of liquids after the eighth day and responded but feebly to the hot packs that were instituted, yet there was a marked diminution in the excretion of urine. We sometimes lose sight of the fact that mercury in small doses is without doubt a stimulant to the kidneys. This effect of stimulation carried on to a degree of hyperaemia, and then on to marked nephritis, with albuminuria and tube casts, is but the result of the absorption of this powerful drug. Urine analysis in our case showed both hyaline and finely granular tube casts, as well as pus cells.

This is a most unusual case of fatal poisoning from local absorption. Probably many of us will practice over long periods and not see a similar case. Bichloride tablets are sold and will continue to be sold to the public ostensibly for disinfection purposes, but in reality, many times, they are used in the household for the prevention of conception. This woman sacrificed her life upon the altar of ignorance—the improper use of a powerful poison and with no thought of suicide.

We have seen one other case where a vaginal wash of strong bichloride caused extensive ulcerations in the vagina. Constitutional symptoms in this case were only a moderate degree of salivation. A period of eight weeks elapsed before the vaginal ulcerations were entirely healed.

Several cases of poisoning have been reported from vaginal douches of bichloride of

strength 1 to 2,000. Even very dilute solutions used in surgical cases are not altogether free from harm, as salivation, diarrhoea, vomiting and more or less suppression of urine has been observed. The most dilute solutions used for irrigating should not be retained.

All have seen fatal or near-fatal results from the accidental or intended taking of corrosive sublimate. Death has followed ingestion of three grains. When swallowed, the symptoms are immediate and violent, purging at first serous, afterward bloody, an uncontrollable desire to be at stool, burning pain in the stomach (this is at times agonizing,) suppression of urine, face bloated and swollen and great prostration. A more horrible condition would indeed be hard to imagine. Death ensues from a combination of ulceration and uraemia, coupled with a rapid emaciation and profound exhaustion. One may begin to feel hopeful of the ultimate recovery of such patients, only to see a returning failure of the kidney function.

THE USE AND ABUSE OF VACCINES.*

Herman Spitz, M.D.,
Nashville, Tenn.

The use of vaccines has become a generally adopted therapeutic measure. It is true there are those—and they are not few in number—who say with ample backing for their statements that vaccines are of no value. These are vaccine pessimists. There are also those who claim extraordinary benefits as a result of the use of vaccines. These are vaccine optimists. Between these two classes are those who take the middle ground; they recognize the value, also the worthlessness of vaccines in various infections and further recognize the limitations of their use. In this class of vaccine conservatists the writer claims membership.

Theoretically, vaccines should prove to be perfect therapeutic agents; they should prove specific in various infections if used correctly.

*Read before the Davidson County Medical Society and Nashville Academy of Medicine; before the Lincoln County Medical Society.

Practically, they have fallen far short of these standards, failing to show the least benefit when we had the most hope for it. Why? This is the question the answer to which has as yet been undetermined.

I just made the statement that theoretically vaccines should prove a specific if used correctly. What do we mean by correctly? Several facts are here to be considered.

First, and by far the most important, is a correct diagnosis. Without this all our efforts to relieve the symptoms of our patients are at best mere guess work.

It is not within the province of this paper to discuss or to give a resume of diagnostic methods. But to illustrate my position and to drive it home, if you will permit the use of the phrase, I will briefly detail a case. Mrs. F. had been suffering with chronic rhinitis for some six to eight weeks, with all of its distressing symptoms, even to the extent of lying awake half the night gasping for breath. After running the gamut of medical aids with no benefit resulting, vaccines were resorted to. A stock vaccine of influenza bacilli was employed, with no benefit after three weeks' use. A mixed vaccine was then tried with the hope that one of the number—it consisted of staphylococci, streptococci and pneumococci—might hit the nail on the head. Guess work throughout.

Stock vaccines having failed, an autogenous vaccine was suggested. Cultures showed a pure culture of micrococcus catarrhalis and the patient was relieved after four or five doses of the autogenous vaccine.

I anticipate some of my audience thinking "He is knocking stock vaccines." Such is not the case—at the present, at least. I am devoting my attention to the physician's side of the question. I am frank to admit that the chances are very good, had a stock of vaccine of micrococcus catarrhalis been used instead of the autogenous the same happy results would have been obtained. The fault was with the diagnostician; he should have made the correct diagnosis, which would have been no very difficult matter. Necessary for this, however, would have been the possession of a microscope, a few slides and some stains, also a little elementary knowledge of microscopical diagnosis.

After making the diagnosis, shall we use this, that or the other remedy? What particular therapeutic value does this agent possess over the other in this particular case? How frequently shall we use it, for how long, etc.? These questions arise in every case, the correct answers to which are necessary to proper treatment of our patients. Here it is necessary that we consider the specific agent under discussion, namely, vaccines.

Vaccines are sterilized cultures of bacteria, which have been isolated from certain diseased conditions. I will not burden you with a detailed description of their preparation. Briefly, cultures are grown upon suitable media for 24 to 48 hours; washed off with sterile saline solution, strength determined, and sterilized, usually by heat, though some use phenol. The vaccine is then diluted to contain a definite number of bacteria per c. c., with a weak preservative to prevent contamination, and after testing its sterility it is ready for use.

Action of Vaccines.

A proper understanding of this subject will lead us into all the associated studies of immunology. Briefly stated, bacteria that have been destroyed by heat, chemical agents or other means, (i. e., killed bacteria,) still retain the power of exciting injected animal cells to produce antibodies, i. e., opsonins, agglutinins, precipitins, lysins, etc. Quantitatively, however, the resulting production of antibodies is not as great as with injections of living bacteria. Experimentally, bacteria whose virulence has been destroyed, or at least greatly modified, have been used and these organisms retain all their powers of inciting antibody production. This method is used in the lower animals, for example, anthrax. In man, the use of antirabic virus and of cowpox virus are striking examples of using attenuated organisms for the purpose of antibody production. The use of attenuated cultures of various bacteria in man for the production of immunity is obviously prohibited. The danger of the organisms retaining their virulence when injected into the body is a barrier which we have as yet been unable to overcome.

1. Vaccines are used for active immuniza-

tion, i. e., prophylaxis or the prevention of disease. This is accomplished by the production of antibodies, resulting from the injection of the vaccine, in order that the antibodies may be present to meet and overcome the invading organisms. Familiar examples of this use are: Vaccination against smallpox, Pasteur treatment of rabies, prophylactic vaccination for typhoid fever.

2. For the treatment of disease. Here vaccines are employed for the purpose of stimulating the uninfected, or we might say, unemployed tissues to antibody formation. This is employed in chronic cases, especially, the action of vaccines being likened to the application of the whip to a lazy horse that is capable of further work and effort.

Theobald Smith in a masterly manner emphasizes the fact that vaccines rarely if ever cure, but act rather in aiding a process which tends to recovery by stimulating a languid process of immunization. Hence we must recognize the fact that vaccines are of use only in chronic or subacute cases, i. e., in those diseases where we are dealing with a languid process of immunization.

Types of Vaccines. (Bacterial Vaccines.)

(1) Autogenous vaccines are prepared from the patient's own bacteria.

(2) Stock vaccines are prepared from any case and kept on hand for use in other cases; these may in turn be polyvalent, i. e., composed of a number of strains of the same organisms derived from a number of cases of the kind being considered.

(3) Mixed vaccines consist of two or more types of bacteria and are autogenous or stock.

4. Sensitized vaccines consist of a mixture of living bacteria and their specific immune serum.

5. Tuberculins. These consist of the extract of tubercle bacilli, aqueous, alcoholic powdered, etc.

Phylocagens—trade name for the filtered culture media in which bacteria had been grown.

Bacterins is a trade name for the vaccines discussed under Nos. 1, 2, 3, and 4.

Serums.

It might not be amiss for me to say a word

or two about serums, i. e., anti-tetanic, anti-diphtheritic, anti-streptococcic, etc. These are the blood serums of immunized animals containing the specific antibody of the organisms with which the animal was immunized. While vaccines and serums are distinct therapeutic entities, their use practically is of immense associated interest, but a discussion of serums constitutes a distinct chapter in our therapeutic armamentarium and cannot be considered here for the want of space.

A controversy as to the relative merits of autogenous and stock vaccines has long been indulged in by their respective adherents.

We are frank to admit that personal reasons do not fail to influence this discussion. We are all after a living and when we can increase that by good arguments "in favor of our side," as a baseball fan says, naturally we resort to the argument. This charge refers to us all, not only to us, but to those whose business it is to supply us with the things we need. Hence biological houses have been the chief exponents of stock vaccines, and individuals (I plead guilty) have been the chief supporters of the use of autogenous vaccines.

We both have grounds for our contentions and I maintain that we still have too little scientific and practical data resulting from the use of vaccines upon which to base iron-bound rules as to which should be used in any given case.

Quoting C. E. Simon of Baltimore College of P. and S. from his latest edition: "As long as we know so little of what vaccines may accomplish it is clear that our clinical knowledge is not sufficient to decide such a question. We can only speak theoretically and theoretically we must admit the probable existence of many strains of a given type of organism, and with this the possibility of individual differences, so that upon this basis, autogenous vaccines would, *ceteris paribus*, appear to be preferable to stock vaccines. But as it is frequently, and in some infections indeed uniformly impossible to prepare an autogenous vaccine, we may be forced to use a stock vaccine in many cases."

As a general procedure autogenous vaccine should be employed whenever possible. To be successful, vaccine therapy demands that the

organisms be as near normal as possible. All the characteristics of the living organisms should be retained in the dead ones as far as it is possible, especially the characteristics of bacteria while in the human body, as these differ materially when grown for any length of time in artificial media.

Stock vaccines are more satisfactory when used in those conditions where it is difficult to identify or grow the invading organisms, thereby losing time; this is the case in tubercular and gonorrheal infections. On the other hand, we must not lose time in securing autogenous vaccines when these are procurable. As many strains are recognized among bacteria, the fact that the strain will not always protect against another must not be lost sight of. In using autogenous vaccines, the risk of using the wrong strain is eliminated.

For obvious reasons we use stock vaccines in prophylactic immunization, i. e., typhoid. In this case, also in the treatment of tuberculosis and gonorrhea, polyvalent vaccines should be employed exclusively.

In some infections, such as colon bacillus, streptococci, staphylococci (?) and others, beneficial results are not seen except rarely after using stock vaccines.

In this connection I desire to read a few extracts from some recent texts on this subject. Quoting Kolmer of the University of Pennsylvania:

"The wholesale manufacture of various bacterial vaccines and their indiscriminate use have brought disappointment to many. Rational and scientific vaccine therapy does not consist in the administration of ready-made, uncertain, and oftentimes hit or miss mixtures, recently so widely exploited. Especially is this true in the use of vaccines for therapeutic purposes."

Charles E. Simon of the College of P. and S., Baltimore, among other things, has this to say:

"In this connection I cannot condemn too strongly the use of some of the so-called polyvalent and mixed vaccines which have been recently placed on the market with the most extravagant claims for their efficiency in the absence of any proof of their value."

When using vaccines we have been taught

to look for the so-called negative and positive phases. By the negative phase is meant a lowering of the opsonins and general defensive mechanism of the body, thereby rendering the patient more liable to infection. This does occur occasionally, but many regard it as of little importance, while others disregard the subject entirely.

The positive phase will be understood to mean the increase of the general defensive mechanism of the body, thus enabling the body to repel and overcome the infection.

Reactions.

We look for local, focal and constitutional reactions. The local symptoms consist of some redness and tenderness at the site of injection, due to the irritating properties of the preservative used. In some instances, contamination may occur, causing a severe local reaction; abscess formation, however, seldom results from such contamination.

The focal reaction consists in an aggravation of the symptoms. Thus wounds may discharge more freely, additional boils may form, expectoration be increased, etc.

Constitutional symptoms, consisting of slight rigors, slight rise in temperature, flighty pains, malaise, etc., are frequently encountered.

As a rule slight focal and constitutional reactions should be obtained, especially after the first two or three doses. This is considered a good prognostic sign. In tuberculosis, the converse is true, namely, no reaction is desired, and therefore infinitesimal doses are used at the start to avoid any reaction.

The dosage varies within extremely wide limits. Experience in the administration of vaccines soon teaches one that several million bacteria, more or less, will not alter the result. When you consider the many millions of these small bodies with which we are dealing, the difficulty in accurately standardizing the dose will be appreciated. An idea of the doses used may be obtained from the following:

Staphylococci, 50 to 500,000,000.

Colon bacillus and Friedlander's, 10 to 100,000,000.

Streptococci and gonococci, 5 to 50,000,000.

In the prophylactic use of typhoid bacilli, the

initial dose is usually 50 to 100,000,000, and increased to 1,000,000,000.

In striking contrast is the use of minute quantities of tuberculin in the treatment of tuberculosis. Here the initial dose is as low as one thirty thousandth of a milligram.

Doses should be repeated every three to seven days, as a rule. Guides for the amount and time of administration are found in the patient's condition. If the symptoms are aggravated decrease the subsequent dose, and then increase gradually. If no aggravation of symptoms is noticed, a more rapid and marked increase of the dosage is desirable. As long as a mild reaction is gotten, the same dose should be continued or slightly decreased until the reaction stops, then commence to increase the dose. The more acute the case, the smaller should the doses be at the start. In chronic cases use large doses. Experience, however, is the best guide and your judgment must be ever on the job. I would suggest that not too much stress be laid on the negative and positive phases. Still, I do not want to be understood as saying, "Disregard them." Neither should we be too enthusiastic about the prognosis. We frequently fail when brilliant results were to be expected.

Contraindications to vaccine treatment should not be lost sight of. Vaccines, when properly made are dangerous substances if improperly used. Vaccines stimulate the cells of the body; if we overstimulate, either by excessive dosage or stimulate cells already overburdened, much harm may result. For this reason it is advisable to commence with a small dose and feel your way, especially in severe general conditions. As vaccines are used mainly for aiding nature in her fight against infection, the conditions of each individual case must be considered, and the relative potency of the vaccine for good or evil in each particular case determined.

In prophylactic immunization, determine the absence or presence of latent or active infection which may be aggravated during the negative phase. It is true this is of short duration, should it occur, yet the immediate harm may outweigh the ultimate good. In the case of smallpox, however, the good resulting from vaccination far surpasses any harm that can

occur, and every one should avail themselves of this prophylactic measure.

Active tuberculosis and other general infections are contraindications for prophylactic vaccination on the general principle that the body's defense is busy with one class of invaders.

Advanced nephritis, diabetes, myocardial degeneration, carcinoma, and other debilitating diseases are contraindications to the use of vaccines unless their indications are exceptionally urgent.

Vaccines for prophylactic immunization are now used against smallpox, rabies, typhoid, typhus, plague, cholera, cerebro-spinal meningitis, and other diseases. The results obtained in the first three diseases named are wonderful achievements.

For therapeutic use, active immunization is being resorted to in an ever increasing variety of diseases. The use of vaccines in genito-urinary diseases, respiratory diseases, diseases of the skin, in otitis media and others is becoming well established, and have been productive of brilliant results in many cases.

In acute general infections, such as pneumonia, typhoid, and in puerperal sepsis and ulcerative endo-carditis and erysipelas, their use has given hopes of beneficial results. The entire subject is, however, yet in the experimental stage.

The subject of tuberculosis cannot be brought into the discussion, as it merits a paper far beyond the time allotted here.

To summarize:

1. Beneficial results from vaccines can only be expected when their use is preceded by an accurate diagnosis.

2. Vaccines are especially indicated in chronic infections.

3. Autogenous vaccines are to be preferred to stock vaccines when they can be obtained. In some cases they must be used; in other cases stock vaccines may give equally good or better results.

4. In the use of mixed vaccines a fresh vaccine should be prepared after four to six weeks, especially if no improvement is noticed. The vaccine may have been prepared from the wrong organisms; some of the infecting bacteria may have been eliminated in that time

so that additional treatment for them would be superfluous; additional infection may have occurred with other organisms.

5. Other means of treatment should be employed. Abscesses should be incised, wounds properly drained, cleanse discharging wounds, give the parts sufficient rest, etc.

6. Get the vaccines from reliable sources. Be sure they are properly prepared.

7. Doses should not be too large—neither should they be too small. It is better to start with a small dose and gradually increase it until a reaction is obtained. Then continue this dose as long as the patient continues to improve. Increase the dose when the reaction stops.

RESOLUTIONS ON DEATH OF DR. T. H. HASSELL.

Dr. T. H. Hassell, of Springfield, Tenn., died at his home September 11, 1915, from the effects of carcinoma. At the time of his death Dr. Hassell was 53 years old, having been born in Sumner County, Tennessee, A.D. 1862. He had practiced medicine in Springfield, Tenn., for twenty years, and had been a member of the Robertson County and State Medical Society ten years. At the time of his death he was Vice-President of the Robertson County Medical Society. He is survived by his wife and two daughters.

Whereas, it hath pleased Almighty God to take from our fellowship to that great beyond, our beloved brother, Dr. T. H. Hassell, and

Whereas, the doctors of the Robertson County Medical Society have suffered the loss of a member who was a true doctor at heart, now, therefore, be it

Resolved, That the heartfelt sympathy of our membership be extended to the bereaved family of our deceased brother, and we reverently refer them to the Supreme Physician of the Universe for such support and consolation as they need in this their hour of sorrow. And, be it further

Resolved, That a copy of these resolutions be sent to the family of our beloved brother and that a page in the record of our Society be set apart to the memory of Dr. Hassell,

and these resolutions copied thereon. And, be it further

Resolved, That a copy of these resolutions be sent to the Journal of the Tennessee State Medical Association, with the request that they be printed therein.

W. B. DYE,

WM. ROYSTER,

H. S. SHOULDERS,

Committee.

EAST TENNESSEE MEDICAL SOCIETY.

The fall meeting of the East Tennessee Medical Association was held at Morristown on October 14 and 15. There were one hundred and fifteen East Tennessee doctors who wrote their names on the register during the two days, and nearly every essayist was there with his paper. If any of the "sectional" societies of the state have ever done better than that, we don't know when it was. The East Tennessee Society is undoubtedly a "live one."

Dr. T. M. Roberts, of Sweetwater, occupied the Presidential chair, and Dr. H. P. Larimore, the Secretary who has so faithfully served for a number of years, was at his place.

Officers for the ensuing year were chosen as follows: President, H. P. Larimore, Chattanooga; Vice-Presidents, W. G. Ruble, Morristown, and W. B. Lovingood, Louisville; Secretary-Treasurer, W. N. Lynn, Knoxville. Jefferson City was selected for the place for meeting in October, 1916. The 1916 spring meeting will be merged with the meeting of the State Association at Knoxville in April, and they'll all be there, too.

CHATTANOOGA CLINICAL AND SURGICAL CONGRESS.

The Chattanooga Academy of Medicine and Hamilton County Medical Society held their second annual "Clinical and Surgical Congress" on October 8. About sixty-five physicians from neighboring counties were present and the entire day was occupied in holding clinics at the various Chattanooga hospitals. The clinics were varied, covering all the various fields. Many interesting operations were performed and numerous medical clinics were held. The Journal has it from visitors who were present that the Chattanooga men acquitted themselves with credit and honor.

THE JOURNAL

OF THE

TENNESSEE STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Tennessee

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NOVEMBER, 1915

EDITORIALS**WHAT MANNER OF MAN?**

A certain man with a penchant for saying things worth while once remarked that "the proper study of mankind is man." We have no particular desire to attempt to delve into the study of man, either generically or specifically, no more than we are willing to waste time trying to decide what a woman is going to do next. We thought, before the silver threads began to obtrude themselves amongst our more or less golden locks, that we knew something about the antics of the so-called gentler sex, but we find that we can prognosticate her performances with about the same regularity that we can tell what Maud is going to do with her southwest extremity.

There was a time when we thought that the medical profession had a code of ethics which laid down certain broad principles of conduct and which governed them in their mode of living, at least professionally. With this code as a premise, it could with reasonable certainty be predicted what the conduct of the profession would be, but, alas! no more. The rank and file of the profession, and the profession as a whole, still know what ethics mean, but in certain quarters there seems to be a widespread self-administration of "twilight sleep." Amnesia has possessed them and they have forgotten all about the painful rules of honor and rectitude. Of these, however, there is some evidence of their offspring suffering the fate the child of the "damerschlafer" often suffers—*asphyxia* and death.

The why and the wherefore of these lines are not to ask "whither are we drifting," because we are drifting properly; nor yet to attempt to call the profession's attention to our code of ethics, for the profession is alright. We simply want to call attention to

what one man did and what some men who had authority did for him.

In the issue of February 19, 1915, the New York Times, there appeared in the magazine section of the paper an elaborate article on a new cancer serum for the cure of inoperable cancer called "autolysin." From this we learned that the "cure" was devised at the General Memorial Hospital by Drs. S. P. Beebe, attending physician to this hospital—which is a research institution associated with Cornell Medical School—and Dr. Alexander Horowitz, who is described as "an Austrian Chemist and Biologist." There were the pictures of Dr. Beebe and the General Memorial Hospital to lend credence to the patently absurd claims of this alleged "cure." On March 6, 1915, there appeared a signed statement by the Medical Board of the General Memorial Hospital in which they denied "categorically the chief statements made in the article." Later, in true Hearst manner, the "cure" was further exploited in Hearst's Magazine. But from these sources we do not learn what are the ingredients of this God-given (?) remedy. There is no use telling the public, for they wouldn't know any way! The Journal of the A. M. A., however, lets us in and we find that (listen, oh you therapists!) it is made up of buckbean, yellow sweet clover, mint, white mustard, liver leaf, pansy, nettle, colocynth, quassia, and so on. The author neglected to state that these should be mixed during the dark of the moon in a country graveyard.

This is the "cure" for cancer in this day and time of scientific medicine! And this by a man of more than national reputation, connected with one of our leading medical institutions! Truly Beebe has out-Munyoned Munyon. But in the language of that last named quack—"there is hope." In the New York Sun of October 20, we find this headline on the front page: "Cornell Ousts M.D. for a Cancer 'Cure.'" Dr. Beebe is here quoted as saying, "I did leave the Cornell Medical School and I imagine I left under some pressure." He also stated that he resigned from the General Memorial Hospital in August simply because his private practice was large and he had too much work to do.

The Cornell authorities are to be commend-

ed for their action is ridding themselves of this quasi-quack. A few more "apologies," a few more "reprimands" and a few more "forced resignations" and we will have fewer names and faces adorning the pages of Hearst's Magazine, The Delineator, The Cosmopolitan, and other magazines, in an attempt to educate the "dear public" in the science of health and longevity. Wherefore we ask: "What manner of man is this" Beebe?

THE SURGEON—EAST, NORTH AND SOUTH.

Egotism is one of the inherent failings of human beings—a fundamental trait of human nature injected into the genus homo, perhaps, when the serpent tempted Adam into partaking of the Missouri wine-sap. As you have no doubt already guessed, the doctor, although an exception in many cases, is just a poor weak mortal after all and, therefore, subject to all the fundamental traits, among which is egotism. But in that collection of men there is a class which leads in this particular fault—as they often lead in gathering the mazuma of this mundane sphere—and that class is the surgeon.

It has been our good fortune to visit many of the clinics in the East, South and North or, as the latter would be referred to in Boston, where they say limb and try not to think of leg, the "Middle West." During these visits men of great reputation have been seen at work. Performing in their own holy of holies we have seen the smouldering ego flash into furious flames of self-conceit. In the East this is most apparent and least justified. There the privilege of operating in a hospital is given almost exclusively to members of the staff. These staff appointments are, for the most part, bestowed on men of political power and prestige or men of wealth, and merit and ability are often consigned to innocuous desuetude. As a result the Eastern surgeon has allowed the center of surgery of the United States to drift to the west of him. Living in the reputation of the past, and on account of an inherent belief that when the Lord created things He made them, and all the rest of us just happened, he can't or won't see farther west than the Hudson River and is

still, in his own mind, the Chanticleer of the surgical barn-yard who bids the sun to rise.

It is not claimed that the Northern surgeon is perfect, but it must be apparent to every open-minded observer that the centers, Cleveland, Chicago and Rochester are vastly superior to Boston, New York and Philadelphia. That they are superior may be amply proven by the large numbers who attend the clinics in these centers with a serious purpose to learn and not to do their post-graduate work on the Great White Way or in a cabaret.

The South has been backward in original work in medicine as well as surgery, but we are in a period of medical renaissance. The large number of text-books and monographs by Southern authors which have appeared in the past few years bear eloquent testimony of that. The fewer, larger and better medical schools, with their increased clinical and laboratory facilities, will give the Southern man the opportunity to show his worth. And when they come into their own, and those are found who shall take their places by the side of McDowell and Sims and Reed we shall see an antithesis of our radiantly egotistical, or egotistically radiant, confrere of the effete East.

NASHVILLE "HEALTH RALLY."

At the request of the Secretary of the Southern Sociological Conference and by courtesy of the pastors of the city churches, a number of the members of the Nashville Academy of Medicine made addresses on subjects pertaining to the public health in the pulpits of these churches on Sunday, October 17. On Monday afternoon a school "rally" was held at the Ryman Auditorium, and on Monday night a meeting for men was held at the First Presbyterian Church, at which the "social diseases" were discussed.

Among the speakers who participated in this effort to interest and instruct the Nashville public in disease prevention were: Drs. J. A. Witherspoon, Witt, Hibbett, Bromberg, Crockett, Cowden, Price, Savage, Fuqua, Gallagher, W. A. Bryan, Shoulders, Roberts, Haley, J. H. King, P. T. Magan, and West.

In several pulpits the regular pastors preached "health sermons" and Profs. Dress-

lar, Dyer and Tate of Peabody and Vanderbilt made addresses on the sociologic aspects of health conservation.

OUR MEDICAL SCHOOLS.

The Medical Department of the University of Tennessee, at Memphis, and the Vanderbilt School of Medicine, at Nashville, began the work of the college year 1915-16 in September. The Journal is advised that the number of matriculants in each of the schools is fully up to expectations and that the work of the year has been entered upon without delay and with every promise of a successful season.

The medical profession of Tennessee, and the whole people of the state for that matter, should have great pride in these two schools and should work tirelessly for their support and for their upbuilding. Their's has been no easy road. They have come to their present stage of perfection in spite of adverse circumstances and most disheartening hindrances. The mere fact that our two medical schools have fought their way to recognition as first-class institutions should stir the heart of every Tennessean who is at all interested in scientific progress.

The fact that they are sending out men who assume and maintain standing in the front rank, should stimulate our doctors and our people to the doing of whatever may be necessary to place our institutions for medical teaching on a basis of financial independence that will enable them to do their work free from all handicaps that a lack of money must inevitably produce.

There are numerous ways in which Tennessee doctors can help Tennessee medical schools. One way is to encourage Tennessee boys to take their training in them, and another is for the doctors themselves to take post-graduate work in them. It would not take a very long time to build up post-graduate clinics in Nashville and in Memphis that would render invaluable service to Tennessee medicine and surgery if our own men would determine to have them.

There has been a deal of heroism shown by the devoted men who have developed the medical schools in Tennessee, and we just can't help saying in this connection that much of

this heroism and much of the hardest work has been upon the part of the young men in subordinate positions. We doubt that they have received full credit for what they have done.

AN ATTITUDE.

The State Registrar of Vital Statistics has recently made an effort to secure the registration of birth and death certificates which should have been filed in every district, but which, for some reason—usually for the same *one* reason—had not been filed. Among other means resorted to by the State Registrar was a letter to Local Registrars asking that they make an especial effort to learn of any deaths which had occurred in their respective districts of which no report had been made. Replies to these letters indicate that death registration is surprisingly complete in most of the counties, but a great many of the Local Registrars complain that physicians are extremely negligent in the matter of making reports. These complaints come loudest and most often from counties in which there is no medical society, but they are not at all infrequent from counties which are supposed to be well organized. It is a matter for regret that any physician in Tennessee will refuse to report *promptly* births and deaths for legal registration, but is positively a matter for wonder that any reputable physician will absolutely refuse to make these reports at all. It does seem that any doctor would be glad to render this small but important service to his patrons and to the state.

The plain truth is that a surprisingly large number of physicians assume an attitude of indifference, if not of positive antagonism, toward all public health work and public health workers. There are many good men among Tennessee doctors who live squarely up to their professed interest in the matter of public health protection and who never lose a chance to uphold the hands of the public health workers. God knows their sympathetic interest and their helpful co-operation is appreciated! But, there are many others who talk one way and do another, while a third class—and a large one, too,—absolutely refuse to lend any aid in any movement looking to general health conservation, *unless* "there's something in it for me."

Certainly this attitude toward public health work reflects little credit upon the profession, and certainly, too, it hinders no little the work of all public health agencies in their work for disease prevention and health conservation. It is not in keeping with the ideals and will go a long way toward influencing the public to withhold from the profession of medicine that confidence which should be theirs to enjoy.

STATE TUBERCULOSIS HOSPITAL COMMISSION.

Governor Rye has appointed a commission to locate and have built a "State Hospital for the Treatment of Pulmonary Tuberculosis," as provided by a law passed by the last Legislature. The appointees are as follows: Dr. Jere L. Crook, Jackson; J. D. Richardson, Murfreesboro; Geo. L. Berry, Rogersville; W. A. Shipp, Centerville, and Dr. Olin West, Nashville.

The law under which this commission was appointed provides that the hospital for the treatment of pulmonary tuberculosis shall be located upon a tract of land not less than five thousand acres in extent and having an elevation of not less than one thousand feet. These restrictions will probably necessitate locating the institution in Middle or East Tennessee.

KNOWN AND NOT KNOWN ABOUT OUR COUNTY SOCIETIES.

Dyer County—Numbers reported for 1915, 28; 1914, 22. Meetings held, don't know. Average attendance, don't know. Reports to Journal, none. Number of physicians in county, 42 (?). Members from adjacent unorganized counties, all near counties organized. Educational work, don't know. Members paid medical defense, 15.

We find that this Society has made a gain of six members in 1915, but we also find that the names, Drs. Austin, McDavid, J. H. Smith, Berry, Ferguson, Moody and Williams, all of which were on the 1914 roll, have not been reported for 1915. The net gain, therefore, is offset by the net loss. This sounds strange, but certainly if seven old men have been lost there has been a net loss of seven. There is no other way to figure it. The Dyer County profession

is a good one, the officers of the County Society are hustlers, and the membership should be at least thirty-five.

Dr. D. L. Flanary is President and Dr. O. Dulaney is Secretary.

Fayette County—Members reported for 1915, 20; 1914, 20. Meetings held, don't know. Average attendance, don't know. Yearly program, don't know. Number of physicians in county, 30 (?). Members from adjacent unorganized counties, all nearby counties organized. Educational work, not reported. Members paid medical defense, one.

The name of Dr. Moorman, which was on the 1914 roll, has not been added to this year's roll. The Society, therefore, shows a loss so far. We are informed by the Secretary and the President that the Fayette County Society is doing well and we feel sure that the names missing from the 1915 roll will be restored and that others will be added. Medical defense seems to be unpopular in Fayette County. The Secretary of this Society is prompt and accurate in business reports.

Dr. J. A. Albright is President, Dr. John Morris, Secretary.

Franklin County—Members reported for 1915, 8; for 1914, 19. Meetings held, we are informed that none are held. Average attendance, —. Yearly program, no. Reports to Journal, none. Number of physicians in county, 36. Members from adjacent unorganized counties, none. Educational work, none. Members paid medical defense, 5.

Drs. A. L. Walker, G. W. Piper, J. P. Grisard, B. W. Sutton, D. W. McCrary, W. F. Smith, C. W. Inge, and H. A. West are the eight men who are members of the Franklin County Medical Society. Dr. Grisard was not a member in 1914, the others were. This Society seems to be in a state of suspended animation, if we can depend upon unofficial reports. We must depend upon them since we get no other kind. A county with men in it like Kirby-Smith, Anderton, Lear, Marable, and others whose names were on the 1914 roll and with those now enrolled is abundantly able to maintain an efficient organization. Why it is done, we are at a loss to know.

We are sorry that we can't tell you who

the President is. The Secretary is Dr. C. W. Inge.

A REAL DRUG STORE.

Again we want to call the attention of our members, more especially those of Davidson County, to the fact that there is a sure-enough drug store in Nashville—one which does not carry patent medicines and in which no counter prescribing is done. The advertisement of this concern appears in the Journal. Clean methods may be encouraged and fakery discouraged if our doctors will patronize the pharmacist who refuses to handle patent medicines.

JOURNAL OF LABORATORY MEDICINE.

With Dr. Victor C. Vaughn as editor-in-chief and a fine company of associate editors, the Journal of Laboratory and Clinical Medicine has made its first appearance and has scored a decided "hit." This new journal is going to fill a real demand, having for an object the presentation of laboratory discoveries and their application in the working fields of medicine and surgery. The first number contains contributions from several of the best men in the land and, if it can be taken as a forerunner of what is to come, the immediate and decided success of this latest recruit to medical journalism is assured.

News Notes and Comment

Dr. Dabney Minor, formerly of Nashville, is now located at Cleveland, Tenn.

Dr. C. C. Odom, formerly of Springfield, is now located in Nashville at 602 Fifth Ave., S.

Dr. T. G. Pollard, Nashville, was one of those who were made Fellows of the College of Surgeons at the October convocation in Boston.

Dr. H. M. Tigert, of Nashville, went to the Boston convocation of the College of Surgeons and was admitted to fellowship in the college.

Drs. E. C. Ellett and W. L. Simpson, Memphis, and Drs. T. Hilliard Wood and M. M. Cullom, Nashville, attended the meeting of the

American Academy of Ophthalmology and Otolaryngology in Chicago in October.

Dr. R. W. Billington, Nashville, has returned from a month's visit to Boston and New York clinics.

Dr. Richmond McKinney, Memphis, was elected a member of the Council of the American Academy of Ophthalmology and Otolaryngology at the recent Chicago meeting.

Drs. T. G. Pollard, H. M. Tigert, W. C. Dixon, W. M. McCabe and Adam Nichol, of Nashville, attended the Clinical Congress of Surgeons in Boston and visited New York clinics during the month of October.

Drs. E. D. Mitchell, P. W. Toombs, O. S. McCown, Moore Moore and John L. Jelks, all of Memphis, were among the Tennessee surgeons admitted as Fellows of the American College of Surgeons at the Boston convocation in October.

The Kingston "Indian doctor" is in more trouble, having been arrested in Chattanooga while in a negro bawdy house in company with a white woman. There's a lot to the story, but we refrain from telling it because the sequel does not comport with our old boyhood notions of what should happen to the nigger.

In our capacity as editor it was found necessary to make just exactly one hundred and fifty-eight corrections in a manuscript handed us for publication. This is slightly above the average. Some of these days we are going to publish about six papers just as we get them—and then run.

Dr. W. J. Mayo, of Rochester, Minn., with his family and a party of friends visited Nashville, October 16, as the guest of Dr. W. D. Haggard, having made the trip in Dr. Mayo's steamboat down the Mississippi River and up the Cumberland, requiring about two weeks. Dr. Mayo was accompanied by Dr. Victor C. Vaughan, of Ann Arbor; Dr. Richard H. Harte, of Philadelphia, and Dr. Donald C. Balfour, of the Mayo Clinic. While in Nashville these

gentlemen made short addresses to the classes at the Medical Department of Vanderbilt University. The excursion was then continued up the Cumberland River as far as Rome. On the return trip they stopped for a clinic at St. Thomas Hospital and then continued on to Louisville, where the vacation trip ended and the party dispersed to their respective homes by train.

We desire to call the attention of the Middle Tennessee and West Tennessee Medical Associations, and, incidentally, the attention of the Tennessee State Medical Association to the fact that one hundred and fifteen doctors registered at the meeting of the East Tennessee Medical Association at Morristown. Also, only two or three who were on the program failed to show up.

We note the following changes of office addresses of Nashville doctors: Drs. G. H. Price and J. W. Moore, to Eve Building; Dr. C. E. Brush, to Independent Life Building; Dr. C. N. Cowden, to Hitchcock Building; Drs. W. H. Witt, J. O. Manier, and R. W. Billington, to 148 Seventh Ave., N.; Drs. A. B. Thatch and Hugh Barr, to Eve Building; Drs. Bromberg, Caldwell and Haiman, to fifth floor Jackson Building.

The following extract is from a letter to the State Registrar of Vital Statistics in reply to one written to all Local Registrars: "In reply to your letter will say that as far as deaths in my district are concerned all have been reported. Therefore if there isn't enough to suit you, you will have to see the doctors and get them to put a finish to a few more. I have nothing to do with that part of the business."

Society Proceedings

ROBERTSON COUNTY.

The September meeting of the Robertson County Medical Society was held in Springfield, Tuesday, October 19, 1915. Meeting was called to order at 10:30 a. m. by President Henry, with the following members present on

time: Drs. Henry, Banks, Moore, Frey, Shoulders, Dye, Royster, Fyke, Woodard, Winters, Jones, Porter coming late in the afternoon session, with Superintendent Bernard and G. H. Elliott, D.D.S., visitors.

Minutes of last meeting read and approved. Clinical cases were reported by Drs. Royster, Woodard, Shoulders and Winters. After this, Superintendent Bernard was given an opportunity to address the Society on the necessity of having another campaign in the county on the subject of "Preventive Medicine and Sanitation" by having members of the Society to visit as many of the public schools as possible and deliver lectures to the school and the patrons of the schools; he expressed himself as being well pleased with the work that was done last year on this line and felt sure that the children and patrons would appreciate the lectures more this year than they did last year.

The Committee on Resolutions in regard to the death of Dr. T. H. Hassell made a report by reading the resolutions they offered; the resolutions were approved and ordered to be embodied in the minutes of the Society. A card of thanks was read that had been sent to the Society from the doctor's family, expressing their appreciation of them and the flowers given at his funeral. Adjourned for dinner. The Society was entertained at dinner at the Albion Hotel.

Reconvened at 1 p. m. The first order of business in the afternoon was reading a paper, "Puerperal Lacerations of the Perineum and Os," by Dr. Wm. Royster; the paper was freely discussed. After this, Dr. Shoulders read a paper on "Fibroid Tumors of the Uterus," and it was freely discussed. Dr. Frey was elected Censor to fill the unexpired term of Dr. Royster that had been made vacant by electing Dr. Royster Vice-President. Dr. Jones made a motion, which was adopted, that a committee be appointed to arrange for speakers, places and dates for the public health campaign; Drs. Dye, Shoulders and Fyke were appointed. Charges of unprofessional conduct were preferred against a member and the matter was left in the care of the Board of Censors for investigation. Drs. Winters and Woodard were appointed Directors for the November meeting, with diseases of the "Circulatory and Nervous System of Children" as topics for discussion.

Adjourned to meet in Springfield, Tuesday, November 16, 1915.

B. F. FYKE.

LOUDON COUNTY.

The Loudon County Medical Society met in regular session Monday, October 11, at the office of Dr. J. T. Leeper in Lenoir City, Dr. Ellis of Friendsville, presiding.

Dr. Brickell presented a patient suffering from osteomyelitis and Dr. Padget presented a patient suffering from chronic ulcer of the leg. These patients were examined by all present and the best lines of treatment discussed.

A number of new men have joined the Society, these being: Drs. J. J. Harrison, Sr., of Loudon; Dr. Arthur Harrison, of Loudon; Drs. Penland and Lee, of Philadelphia, and Dr. Anderson, of Morgantown.

Those present were: Drs. W. H. Harrison, J. J. Harrison, Jr., Arthur Harrison and Robinson, of Loudon; Ellis, of Friendsville; Brickell, of Unitia; T. J. Hickman, J. G. Eblen, W. D. Padget, J. T. Leeper and McDonald, of Lenoir City.

Dr. J. J. Harrison, Jr., and Dr. J. G. Eblen are to read papers at the next meeting.

Our Society has been running quietly all summer, but we have now taken on new life and not only plan to meet regularly, but to have a banquet during the holidays.

Dr. W. T. Foute, who has been on the sick list for some time, is improving.

T. J. HICKMAN, Secretary.

BEDFORD COUNTY.

Bedford County Medical Society met in regular session October 21, 1915, and both president and vice-president being absent, Dr. G. W. Moody was called to the chair and called the meeting to order with the following members present: Drs. Coble, Shelton, Orr, Avery, Woods, Freeman, Thompson, Hyatt, Patton, Moody, Reagor and Conditt. Minutes of previous meeting read and adopted. Dr. F. B. Reagor read a paper on "Puerperal Sepsis." Dr. J. K. Freeman opened discussion and then the paper was discussed by most all present. The committee which had been appointed to wait on Mr.

William Thomas, a cancer paste fakir of Nashville, reported that they had notified Mr. Thomas that unless he stopped his illegal practice of medicine the Bedford County Medical Society would immediately take steps to prosecute him in our courts for such illegality. On motion the society will postpone its November meeting to the fourth Thursday in place of third Thursday on account of meeting of Middle Tennessee Medical Association. No other business, adjourned to next regular meeting, which will be November 25. F. B. REAGOR, Sec'y.

CARROLL COUNTY.

The Carroll County Medical Society met in Huntingdon on October 26 with the following members present: Drs. Wright, Hillsman, Bryant, Huffman, Dennison, Aydelott and Dodds. The subjects for discussion were pellagra and cancer.

Dr. Aydelott read a paper on the former, and after a discussion by the several members present Dr. J. H. King, of Nashville, favored the society with a very excellent talk on the subject in hand, after which it was agreed to let the remainder of the program pass over to our next meeting and Dr. Dennison agreed to prepare a paper on cancer for the December meeting.

The members present were delighted to have Dr. King with us, and only those present can know what those who were not present missed in not hearing him on pellagra.

The society will meet at McKenzie in December. B. C. DODDS, Sec'y.

DAVIDSON COUNTY.

July 13th, 1915—The President, Dr. W. E. Hibbett, called the regular meeting of the Academy to order at 8:20 p. m. The following members were among those present: Drse. Friedman, Haiman, Kennon, Floyd, Bloomstein, Hargis, O. Bryan, McCabe, Pickens, Schell, DeWitt, H. King, Robert Sullivan, L. Caldwell, Leonard, Morrissey, Harris, M. O. Davis, Jack Witherspoon, Simons, Williamson, Savage, H. Tucker, Billington, Duncan Eve., Jr., Oliver, Dixon, Tigert, and Pollard. The paper of the evening was by Dr. D. R. Pickens on "Fistula in Ano."

The discussion was opened by Dr. Paul DeWitt. The paper was also discussed by Dr. Simons. Dr. Pickens closed the discussion.

Cases were reported by Drs. Billington, Simons and McCabe.

There being no further business, the Academy adjourned.

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July 20, 1915—The regular weekly meeting of the Academy was called to order by the President at 8:20 p. m. Among those present were: Drs. Price, Padgett, Duncan Eve, Jr., R. Sullivan, Pollard, Bloomstein, R. Brown, Manier, Edwards, McKinney, Williamson, O. Bryan, C. F. Anderson, Pickens, Tigert, McCabe, J. Witherspoon, Savage, Schell, Friedman, Orr, and Dixon.

There was no essay scheduled for the evening's meeting.

Dr. Price addressed the Academy in regard to the appointment of Pure Food and Drug Inspector. This was discussed by Drs. McCabe, Tigert, Gallagher, Dixon, and C. F. Anderson.

Dr. Price read resolution embodying his idea of the qualities necessary for a man to have to efficiently fill the position of Pure Food and Drug Inspector, and moved that they be adopted by the Academy, and presented to the Governor of the state. The motion was seconded by Dr. McCabe. After some amendments were added to Dr. Price's original resolution, it was adopted.

Dr. Gallagher moved, seconded by Dr. McCabe, that Dr. Price be appointed to carry the message to the Governor. Dr. McCabe amended this motion by adding the names of Drs. Savage, Padgett, Cowden, Edwards, the President and Secretary. Carried. The amended motion was put and carried.

A series of cases was reported by Dr. Padgett, after which the Academy adjourned.

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July 27, 1915—The President, Dr. W. E. Hibbett, called the regular meeting of the Academy to order at 8:15 p. m. Those present were: Drs. West, DeWitt, L. Caldwell, R. Sullivan, Gaines, Jack Witherspoon, McCabe, Pickens, Aycock, Manier, Padgett, Morrissey, Jobling, Bloomstein, Friedman, Haiman, M. O. Davis, T. A. Leonard, Duncan Eve, Jr., Williamson, R. Brown, Savage,

Cowden, H. Tucker, H. King, Peterson, R. Barr, McKinney, and Dixon.

The reading of the minutes was dispensed with.

The essayist of the evening was Dr. Paul DeWitt, his topic being "Local Anaesthesia in Rectal Surgery."

Dr. D. R. Pickens (opening the discussion) said that he would go the essayist one better, and say that 90 per cent of rectal cases can be done either under local anaesthesia or regional anaesthesia. Since using Laewen's sacral anaesthesia he has adopted it exclusively, where the sphincter requires dilatation. The speaker says under this dilatation is more easily performed than by a general anaesthetic. Dr. Pickens never uses cocaine, preferring novocaine. He is afraid of quinine and urea, as they occasionally produce infiltration masses, that have to be dissected out.

Dr. DeWitt closed.

Dr. West discussed the organization of a pellagra Commission, and urged the co-operation of the physicians of the county, especially by the prompt reporting of the cases coming under their observation. This, he said, would greatly aid the Commission in a survey to be shortly undertaken by the latter.

Dr. Jobling discussed the increase of pellagra and the theories as to its cause, stating that he does not believe in Goldberger's theory of the dietary cause of this disease.

Dr. Peterson spoke of the number of cases he had seen with Dr. Tucker in North and West Nashville. In some sections three or four cases in one family were seen. He stressed the importance of reporting these cases of pellagra by the physician.

Dr. Gaines suggested that the Academy have a paper on the diagnosis of pellagra.

Dr. Jobling urged the Academy to have a clinic on pellagra.

Dr. West moved that the Secretary be instructed to provide a program on pellagra for the next regular meeting of the Academy. Seconded and carried.

Under the heading of "Case Reports," Dr. Jack Witherspoon exhibited an X-ray plate, showing a fracture of the middle third of the humerus in a man of thirty, caused by muscular contraction.

In discussing this case, Dr. Gaines thought

that some focal disease of the bone should be anticipated if constitutional causes can be eliminated as a predisposing factor. He said these cases usually show some sacramatous condition of the bone.

Dr. Witherspoon said the plate ruled out any disease of the bone; and that the patient did not have syphilis.

The case was discussed further by Drs. Padgett, H. King, Cowden, Gaines, and Duncan Eve, Jr.

Dr. Jack Witherspoon reported another case; a woman of fifty-three, who complained of urticaria. Laxatives and bromides were given. The next day the patient complained that her linen was stained by perspiration, the stain strongly resembling iron rust. Dr. Witherspoon said that he had examined the stain, and that it did not contain blood or bile. He asked if some one could enlighten him on the matter.

There being no further business, the Academy adjourned at 9:19 p. m.

August 3, 1915—The regular meeting of the Academy was called to order at 8:15 p. m. by the President, Dr. Hibbett. Among those present were the following members: Drs. J. A. Witherspoon, D. J. Roberts, Morrissey, Gaines, Toy, Friedman, Haiman, West, Pickens, Kellar, L. Caldwell, Burch, Ezell, B. G. Tucker, S. S. Briggs, Hargis, Weaver, Jobling, Peterson, Harris, T. Briggs, Simons, Oughterson, Crockett, Shoulders, Manier, Handley, Aycock, Fuqua, H. King, Buckner, Dixon, Duncan Eve, Jr., Yale, Spitz, Sanders, Hill, Williamson, H. Barr, Thach, R. Sullivan, R. Brown, Sharber, Jones, McIlvain, O. Bryan, Kennon, M. O. Davis, W. B. Anderson, DeWitt, Cayce, Billington, Bloomstein, P. T. and L. E. Magan, C. C. Sullivan, and Nichol. There were a number of persons present who were there by reason of a public invitation in the press.

The President asked Dr. J. A. Witherspoon to preside.

The meeting was devoted to a consideration of pellagra.

Dr. Peterson spoke on the etiology of the disease.

Dr. Jobling outlined his plan of survey he is carrying out in Davidson County in regard to the disease.

Dr. Hibbett gave an outline of the diagnosis of pellagra.

Dr. B. G. Tucker read a paper on the treatment of pellagra.

After a few remarks by Dr. Olin West in regard to pellagra, especially as affecting Davidson County, the Academy adjourned at 9:45 p. m.

August 10, 1915—The regular weekly meeting of the Academy was called to order at 8:10 p. m. by the Vice-President, Dr. H. M. Tigert. In the absence of the Secretary, Dr. Jack Witherspoon was requested to serve in that capacity. The following members were among those present: Drs. Barr, Cullom, Price, Tarpley, Padgett, T. A. Leonard, Hailey, Savage, Sanders, Jack Witherspoon, C. F. Anderson, Dixon, Sullivan, Edwards, Pickens, Orr, McCabe, Manier, Williamson, Friedman, Spitz, Kennon, Aycock, R. Caldwell, Simomns, D. J. Roberts, and W. B. Anderson.

Dr. Herman Spitz read the paper of the evening on "The Use and Abuse of Vaccine."

The paper was discussed by Drs. Litterer, D. J. Roberts, Price, Friedman, and closed by the essayist.

Under the heading of "Case Reports," cases were presented by Drs. Cullom, Manier, and Robert Caldwell.

There being no further business, the Academy adjourned.

August 17, 1915—The Academy was called to order by the President, Dr. Hibbett, at 8:15 p. m. Those present were: Drs. Savage, Nichol, Cowden, H. King, Klunkett, Ezell, Friedman, Witt, Pickens, Handley, Bloomstein, Shoulders, Aycock, Jack Witherspoon, C. F. Anderson, Williamson, McCabe, Pollard, W. B. Anderson, Edwards, Collum, H. Tucker, Manier, Hill, Harris, Price, West, Kennon, Fuqua, Brown, Crawford, Sullivan, Cayce, Padgett, Dixon and Dunklin.

The paper of the evening was read by Dr. Kennon, subject being, "Hysterical Amblyopia."

The discussion was opened by Dr. A. W. Harris, and continued by Drs. Savage and Price. The essayist closed.

Dr. West reported a case of typhus fever

in a girl seven years old, who was visiting in Nashville. Her home was in Memphis.

There being no further business, the Academy adjourned.

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August 24, 1915—The Academy was called to order by the President, Dr. Hibbett, at 8:25 p. m. Those present were: Drs. Price, Padgett, Cayce, Robert Sullivan, Bloomstein, O. Bryan, Sanders, H. King, Orr, Friedman, Pickens, Fuqua, D. Eve, Jr., Pollard Manier, Kennon, McKinney, Williamson, Aycock, McCabe, Sharp, Simons, Eggstein, Peterson, J. Witherspoon, and Dixon.

There being no available essay, the evening was devoted to case reports.

Dr. Kennon reported a case in which he was doing a tonsillectomy, and found a protuberance in the tonsillar fossa. On close inspection, this was found to be a cartilagenous horn about an inch long.

Dr. Price reported a case of sub-conjunctival injection of cyanide of mercury in a case of iritis. In all a dozen injections were given, some being sodium citrate. The case at present has a vision of 20-30 minus.

Dr. Cayce thinks the iodides should be pushed in all cases of iritis, both specific and non-specific, in conjunction with subconjunctival injections.

Dr. Kennon said that in his experience, iodides in any of the intra-ocular conditions, were disappointing. He thinks mercury of undoubted benefit.

Dr. Price's case was discussed further by Drs. Cayce and Orr.

Dr. Simons reported a case which was sent to him as a surgical kidney, but which proved to be a four-months' arrested pregnancy.

Dr. Dixon exhibited a specimen of hypernephroma removed from a girl twenty years of age.

The President spoke briefly in regard to the Pellagra Commission of the county, and suggested that a committee of the Academy be appointed to aid this Commission in securing an appropriation of \$10,000 from the Davidson County Court to aid the Commission in their work.

Dr. Gallagher moved that a committee of five be appointed to carry out the suggestion

of Dr. Hibbett. This was seconded and carried, and the Chair appointed Drs. Witt, Duncan Eve, Jr., Pollard, O. N. Bryan, and H. M. Tigert.

There being no further business, the Academy adjourned at 9:19 p. m.

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August 31, 1915. The President, Dr. Hibbett, called the regular weekly meeting of the Academy to order at 8:10 p. m. Among those present were: Drs. R. Caldwell, DeWitt, Culom, Savage, Glasgow, Orr, Robert Sullivan, Weaver, Fuqua, O. Bryan, Aycock, Kennon, Ezell, L. Caldwell, H. King, Cowden, Pickens, McKinney, Thach, H. Tucker, Simons, Friedman, Oughterson, Keller, McCabe, Tigert, C. F. Anderson, C. C. Sullivan, Jones, Handley, Nichol, Dunklin, Pollard, West, Sanders, J. Witherspoon, Dixon, H. Barr, Edwards, Williamson, R. Brown, Duncan Eve, Jr., Floyd, and B. G. Tucker.

The minutes of the preceding evening were read and approved.

The essayist of the evening was Dr. E. M. Fuqua, his subject being "Syphilis of the Stomach."

Dr. Aycock (opening the discussion) said that the literature on this subject was rather recent. He said Smithies, of Chicago, had analyzed 5,547 cases of dyspepsia, 1,603 of which were referable to the stomach and duodenum; 26 of these latter were syphilitic. The speaker stated that Smithies found the majority of cases usually occurred several years after the appearance of the initial lesion, the time varying from one and one-half years to thirty-eight years. The speaker thinks that the therapeutic test is of value in the diagnosis, in view of the fact that the stomach ordinarily revolts against anti-syphilitic treatment, whereas symptoms referable to the stomach, due to syphilis, clear up under this treatment.

Dr. Oughterson referred to a report in the British Medical Journal, of about five years ago, of the re-examination of specimens in which a large percentage of so-called carcinomata were in reality syphilitic lesions of the stomach. The speaker said that the stomach gives such a variable symptomatology that the diagnosis can only be made tentatively. He thinks the syphilitic changes in the blood ves-

sels of the stomach may give rise to many gastric symptoms.

Dr. Simons thinks the diagnosis of syphilis of the stomach should be guarded. "There is a difference between syphilitic gastritis and gastritis in syphilitics," said the speaker. "Clinically," he said, "even with a Wasserman, the diagnosis should be guarded." He believed syphilis of the stomach is more common than we suspect.

Dr. Jack Witherspoon stated that the X-ray plates of syphilis of the stomach resemble cancer more than ulcer. Also that syphilitic lesions of the stomach are often multiple, and tend to produce hour-glass contractions.

The President extended the privilege of the floor to the visitors, Drs. Jenkins, of Smyrna, and Mitchell, of Oklahoma. Dr. Jenkins said he did not wish to discuss the paper, and thanked the Academy for the courtesy.

Dr. Handley stated that remarkable progress in the knowledge of syphilis of the stomach had been made in the past twenty-five years. He stated that long ago he had concluded that mucous patches of the throat extend down the oesophagus into the stomach. He said if mucous patches occur in the rectum, why was it not reasonable to suppose they occurred in the stomach.

Dr. Fuqua (elcsing) stated that he was stimulated to write the paper by observations in the Vanderbilt Clinic. He stated that he believed two per cent of all stomach symptoms are syphilitic.

Case reports were called for, and Dr. Ezell reported the removal of a pin, from the larynx of a child six years old, by the aid of the bronchoscope. He exhibited the pin.

Dr. Orr asked if it is necessary to give ether in these cases. Dr. Ezell replied that he found it more satisfactory to anaesthetize patients under twelve years of age in doing bronchoscopy.

Dr. Cowden spoke on the possibility of the Academy as a body, taking some means to compel insurance companies to pay a fee of \$2.00 for the filling out of sick-benefit claims.

Dr. Gallagher stated that in his opinion, the Academy could do nothing in this respect, in view of the fact that the claimant must furnish evidence to the company in order to receive the benefit, and that the burden of proof was

on the policyholder, and not on the company. The resolution was seconded by Dr. McCabe, but the Chair recognized Dr. Pollard's motion to adjourn, which was put and carried.

Book Reviews

INTERNATIONAL CLINICS. Vol. III, 1915 Series. J. B. Lippincott Company, Philadelphia. \$2.00.

It will be hard to find more instructive entertainment and entertaining instruction in any volume anywhere near equal size than can be found in this number of International Clinics. There are four divisions, as follows: Diagnosis and Treatment, Pediatrics, Borderland Medicine, and Surgery. There is not a physician in all the land who cannot get far more than his money's worth out of any one of several of the twenty-five contributions which are listed under the four headings above given.

Bremerman's article on "Gonorrhoea: Its Complications and Sequelae" is fine and it's a needed article. Brady's "Therapeutic Technic" is a scintillating arraignment which should be widely read and which should result in awakening certain much to be desired realizations among surgeons, internists, and manufacturing pharmacists. Newlin reports several instructive cases in his "Notes On Some Unusual Causes of Abdominal Pain."

Four well chosen papers are presented under "Paediatrics" and the section entitled "Borderland Medicine" contains eight readable contributions on a wide range of subjects, while strictly surgical subjects are discussed in four articles contributed by very able writers. If you can't be interested and helped by this volume, you are hopeless!

A TEXT-BOOK OF PATHOLOGY. By Alfred Stengel, M.D., Sc.D., Professor of Medicine University of Pennsylvania, Physician to the Pennsylvania and the University Hospitals; and Herbert Fox, M.D., Director of the Pepper Laboratory of Clinical Medicine, University of Pennsylvania, Pathologist to the Philadelphia Zoological Gardens. Sixth edition reset, 468 text illustrations, many in colors and many colored plates. W. B. Saunders & Co., London and Philadelphia, 1915.

This book, consisting of about a thousand pages, is the sixth edition of Stengel's Pathology and in its preparation Dr. Stengel is joined as co-author by Herbert Fox, M.D.

This well-known text-book has been largely rewritten and many new chapters added. The chapters on technic have been omitted and this seems to us to be a wise move, for it takes up too much space that should be devoted to other matter, and is covered more fully in texts on technic. The space devoted to the nervous system has been reduced and in places has probably been cut too much.

New sections have been added on the eye, ear, and skin.

The work maintains the high order of the previous editions and ranks among the best of the present day works.

DISEASES OF THE NERVOUS SYSTEM. A Text-Book of Neurology and Psychiatry by Smith Ely Jelliffe, M.D., Ph.D., Adjunct Professor of Diseases of the Mind and Nervous System, New York Post-Graduate Medical School and Hospital; and William A. White, M.D., Superintendent of the Government Hospital for the Insane, Washington, D. C., Professor of Nervous and Mental Diseases, Georgetown University, and Lecturer on Psychiatry, U. S. Army and U. S. Navy Medical School. Octavo 796 pages, with 331 engravings and 11 plates. Cloth, \$6.00. Lea & Febiger, Philadelphia, 1915.

This is a new text-book and one arranged very differently from the ordinary book on this subject. After devoting two short but complete chapters to the examination of the nervous and mental case, the authors divide the rest of the book into three parts.

I. Physico-Chemical Systems (Vegetative or Visceral Neurology.)

II. Sensori-Motor Systems (Sensori-Motor Neurology.)

III. Psychic or Symbolic Systems (Neuroses and Psychoses.)

This is rather a new way of dividing the subjects of nervous and mental diseases, and we think rather a good one. In the first part is a good chapter on the endocrinopathies, one which gives the student a better idea of the connection between the glandular diseases and those of the nervous system.

The second part, as its caption implies, takes up ordinary neurology, but leaves the so-called functional diseases for the third part. The last chapter in the second part deals with syphilis of the nervous system, a subject which has received much attention in the recent past and one concerning which our ideas have had to be readjusted in many places. The authors have arranged this very well and have incorporated practically all the newer facts which have a firm foundation.

In the third part the classification of the neuroses is along the line of Freud, and in treatment of these as well as some of the psychoses, emphasis is put on the Freudian methods.

The illustrations are good and the schematic plates are quite instructive to the student and practitioner.

Closely read the individual chapters on some subjects are not full enough and isolated facts are rather too bluntly put and not enough explanation given. This is a disappointment. The authors have

attempted, of course, to cover the fields of both neurology and psychiatry in one volume of only 796 pages, and of necessity have had to condense wherever possible. They think distinction between the two artificial and claim that a double work would tend to perpetuate it; then they could have simply written the book in two volumes under the same divisions as in the present one.

On the whole, this new book is good, and can be referred to without disappointment by the student and practitioner.

THE CHICAGO MEDICAL CLINICS, NO. II. W. B. Saunders Company, Philadelphia.

The tendency to bring clinical teaching to the practitioner in his home is abroad in the land and much to be welcomed. It is a kind of outgrowth from hospitals reports in which details of cases were given. We have many forms of this teaching now—the International Clinics, the Mayo and Murphy publications, Cabot's two books on Differential Diagnosis and later his clinical reports from the Massachusetts General Hospital with autopsy findings. The Medical Clinics of Chicago is the last to come to our desk, and while the contributors do not always rank with Cabot, Murphy and Mayo, the volumes presented speak for the judgment of thoroughness of the clinicians. With few exceptions Volume 2 takes up subjects of present-day interest, but all the subjects considered appeal to practicing physicians. There is danger that such a scheme of "clinics" will lead to a certain amount of "fadding," but the present volume is rather free of this feature. Publications of this sort will afford opportunity for certain men to be put in the limelight. For this reason it is to be hoped that the selection and editing of clinical talks will be based on merit alone. So far the spirit and the subject matter of the selections can be thoroughly commended.

SYPHILIS AS A MODERN PROBLEM. By Wm. Allen Pusey, M.D., Professor of Dermatology in the University of Illinois. Press of American Medical Association, Chicago, 1915.

This monograph was prepared by Dr. Pusey for the American Medical Association "Commemoration" of the building of the Panama Canal as a triumph to sanitary science. Along with other productions from able pens it was incorporated into a volume in which were also discussed the other two greatest plagues—cancer and tuberculosis.

It is indeed a timely work by a master mind, written with the most worthy purpose of presenting in an understandable way the real problem of syphilis as it affects the life of the people. There is no foolish prudery in it, neither is there any equally senseless exaggeration and sensational statement. It is fit for reading by an intelligent public and will prove profitable for the intelligent doctor, too.

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of this oil makes it especially
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oils are indicated.

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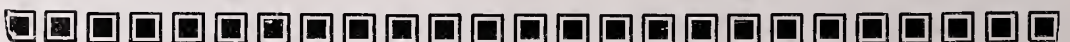
Conforms to U. S. P.; B. P.; C. F.; G. P.; Ph.
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A COMPARATIVE STUDY OF THE DIAGNOSTIC TESTS FOR SYPHILIS.

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Laboratory tests for syphilis can be made upon four kinds of material: Juice from a primary sore, the blood or its serum, the spinal fluid and excised portions of tissue. Each of these has its special indications. A consideration of the luetin test is included, although this is not a laboratory procedure.

Juice from the sore must not be taken too soon after local chemical treatment. It may be smeared upon a slide and stained with any of the Romanowski methods by exposing to repeated fresh portions of stain for about thirty minutes, or it may be mixed with India ink, "Chin Chin Liquid Pearl," and examined under oil after drying. Both these methods may give misleading pictures and are too often negative. They are not worth serious consideration. The best plan is to have the patient convenient until satisfied that nothing can be found. The equipment needed is a complete improved dark-field system with adequate illumination, nothing less than the equivalent of a small arc lamp. One should practice with this experimentally until the whole system can be handled without confusion or loss of temper. Then it must be used often enough to keep in practice. It is the one and only one of the diagnostic methods to be recommended for use by the doctor himself. Slides and coverglass, both of the right thickness (and this is very important) are

thoroughly cleaned, last with ether, so that fluid will not "crawl." The sore is lifted between thumb and finger if possible; if not, with forceps guarded with rubber tubing. It is necessary to blanch it as well as express juice from it. The sore is first rubbed off, and the exuding juice, free from blood, is taken up with a slide or a platinum loop and transferred to a slide; a drop of salt solution is added and coverglass put on. Too much fluid causes the coverglass to "ride" when the immersion lens is used; lower powers are inadequate. Oil is used under the slide as well as on the coverglass. Untreated sores in the earlier stages almost always reward the patient worker with success. This is worth at least an hour's time to any doctor. It is worth infinitely more to the patient than a positive Wassermann test (*vide infra*). It gives them a reasonable certainty of a positive cure, and it is good preventive medicine. The spirochete pallida can be recognized in the dark-field at once by the remarkable symmetry of its convolutions and its revolving motion. It looks like a fine steel shaving at white heat upon a smoke-grey background.

For the examination of the blood several methods have been suggested. The earliest of these worth recommending was that of Justus, which is still useful within certain limits. If there is a critical fall in hemoglobin in an untreated patient within twenty-four hours after a rub of 5 grams of mercurial ointment it points rather definitely to syphilis. Several precipitation tests have been proposed—those of Porges and Meyer, Herman and Perutz, Elias, Porges, Neubauer and Salomon, Landau, Fornet, and others can be dismissed as unworthy of attention. The literature upon these can be found in 14, 21, 23, 24, 44, 55, 64. It can be definitely

stated that all short cuts to the diagnosis of syphilis have been shown to be complete failures.

The Wassermann reaction, with its various modifications, can be found described in all modern text-books bearing even remotely upon the subject. There are still physicians who say they cannot understand the descriptions given. To them I offer the following:

The Wasserman test is a complement fixation test. Complement, that which "completes," causes the reaction between any specific anti-body and the substance to be specifically acted upon. The two may combine, but no reaction results without the complement. The specific anti-body is called the amboceptor and the substance acted upon the antigen. Complement is presented in any neutral serum.

Antibacterial serum, for example, contains the amboceptor, the bacterium to be acted upon is the antigen, complement is furnished by the serum of the recipient. This triplet, amboceptor, antigen and complement must always be brought into relation in definite proportions to secure the reaction.

The hemolytic system which is part of the Wasserman reaction is a system of amboceptor, antigen and complement, produced as follows: A rabbit is treated with sheep corpuscles, in consequence of which its serum becomes hemolytic for sheep's cells. After inactivation, which destroys the complement which the serum **normally** contained, the serum is not hemolytic unless reactivated by fresh complement. For this we use serum from a guinea pig, which furnishes a very sensitive complement. Here we have hemolytic amboceptor (rabbit's blood), antigen (sheep's blood corpuscles, washed free from serum), and complement (guinea pig's serum.)

If we mix a patient's serum, containing the specific antibody (amboceptor) of the spirochete of syphilis, with the specific antigen, together with a titrated quantity of guinea pig's serum and incubate, the combination of antigen, amboceptor and complement can take place. If we now add the hemolytic system, mentioned in the last paragraph, there is no

complement left and the corpuscles do not dissolve. If we have the serum of a normal individual, on the other hand, no syphilis amboceptor being present, the antigen remains inert, the complement is free, the hemolytic amboceptor with its antigen (sheep's blood) appropriates the complement, and hemolysis takes place. The complement has not been fixed. These re-agents are exceedingly delicate, some of them vary from hour to hour, their proportion has to be adjusted with great accuracy and the tests carried out with an adequate number of controls. This phase of my paper has been discussed in another paper.* It stands to reason that an excess of hemolytic factors convert a positive Wasserman reaction into a negative one, whilst a deficiency of them makes a negative appear to be positive. For details of technic standard works upon serology must be consulted. There are text-books devoted entirely to the Wasserman reaction. Any of these contain bibliographic references upon technic: ⁴, ²⁸, ³⁹, ⁵⁴, ⁴⁶, ⁵⁹, ⁶⁰.

Unfortunately, the Wasserman reaction is no longer a standard procedure. All kinds of individual systems, all kinds of short cuts and all kinds of special frills have been introduced, so that tabulation of diagnostic value is extremely difficult. There is considerable discussion as to the relative value of different antigens. It may be regarded as settled that lipid antigen is better than syphilitic liver. Occasionally, however, a syphilitic serum may react to the latter when negative to the former. Pure culture of spirochete has been very disappointing.⁵⁸, ⁶⁴. Cholesterinized antigen gives more positives, but also gives them in persons who have no clinical syphilis and in whom no history of syphilis can be made out. Lecithinized antigen has been used to some extent, but is open to the same objection. Standard antigens, that is, luetic liver extract and acetone-insoluble lipid, when guarded with proper controls, do not, in the hands of competent serologists, give reactions with normal sera or those of persons suffering from diseases not readily differentiated clinically from syphilis, except,

perhaps, certain cases of leprosy and tuberculin treated cases of tuberculosis. A completely positive Wasserman reaction with the serum of a person presumably well otherwise, practically always indicates syphilis. The fact that some cases of apparently non-syphilitic pemphigus have given the reaction does not, perhaps, invalidate this statement. It has been claimed that jaundice gives a positive reaction. We have had two cases of jaundice to give regularly positive Wasserman reactions. One of these subsequently exhibited undoubted evidences of syphilis and gave a positive reaction a year after the jaundice had disappeared without having subsequently acquired syphilis. The other case was lost sight of.

Coming back to the cholesterinized antigen, in our tests, carrying a considerable number in parallel series with other antigens, and always in graded dilutions, we are not convinced that it possesses any advantage over the old expedients of reducing complement or increasing serum. We are still carrying cholesterinized antigen in parallel control in cases where the diagnosis of syphilis is not in doubt, just as a control for treatment. Noguchi's⁵⁴ plan of using an antihuman system has not found general adoption. By this method the percentage of positives in known syphilis was considerable higher, but here, too, it was found that there were too many errors on the positive side. For further reference to the Noguchi system the reader is referred to Craig³⁸, Fox¹¹, Kaplan²⁸, Noguchi⁵⁵, ⁵⁶. Our own experience with the antihuman system has not been satisfactory. We had several positives in persons whose subsequent history negated the diagnosis of syphilis. I

cannot agree with Kaplan that it rarely reacts with jaundiced individuals. We also had one reaction with a case having heavy infection with malaria during segmentation, and one with a case of brain sarcoma. It is just such cases in which an antihemolytic property has been developed in the serum where a negative hemolysis might be expected when an antihuman system is used.

No discussion upon the diagnostic value of the Wasserman test that does not take into consideration the technic and the personal and equipment equation of the operator can throw any light upon the problem. Such discussion as that of Uhle and MacKinney⁶¹ are only confusing. Not until a standard technic with iron-clad specifications is adopted can we classify, tabulate or draw deductions from results of the Wassermann test. The requirements should be exacting to the last degree, yet simple enough to make it available in relatively small towns. It should specify several antigens in graded strengths, the maximum not more than one-fourth the anti-complementary dose. Reports worthy of publication should include reference to stage of disease, degree of treatment, number of cases tested, strength of re-action, degree of clinical manifestation and all data likely to influence the reaction.

The modifications which make the reaction more sensitive are, perhaps, permissible for predicating a possible cure or as control of treatment, but they should not be relied upon to establish the diagnosis of syphilis. It is, indeed, never safe to rely absolutely on the Wasserman reaction without some clinical corroboration. The following tables are offered to give an idea as to the relative results, using three different methods:

Noguchi System Using Antihuman Amboceptor, Titrated Complement Acetone Insoluble Lipoid Antigen and Unheated Serum.

Comparison With the Wassermann Method.											
Primary Syphilis			Secondary Syphilis			Tertiary Syphilis			Latent Syphilis		
No.	W.	N.	No.	W.	N.	No.	W.	N.	No.	W.	N.
cases.	P.C.	P.C.	cases.	P.C.	P.C.	cases.	P.C.	P.C.	cases.	P.C.	P.C.
Noguchi	73.9	86.9	79	83.7	96.2	65	80.0	87.6	59	61.0	75.5
Fox	100.0	100.0	37	97.0	100.0	32	71.0	84.0	54	46.0	62.0
Kaplan	90.0	97.0	281	86.0	98.0	191	73.0	81.0	79	51.0	75.0
Swift	81.0	81.0	76	92.0	97.0	45	80.0	88.0	85	55.0	62.0
Corson-White	86.0	100.0	146	98.0	99.0	47	80.0	80.0	28	60.0	64.0
Kalski	100.0	100.0	50a	94.0	100.0	75b	60.0	80.0	..	...	...
Total	208	88.0	669	92.0	98.0	455	74.0	83.0	305	54.0	68.0
Without Comparison.											
Noguchi	70	92.8	197	...	96.0	177	...	88.9	270	...	74.4
Craig	90	72.0c	163	...	88.0	74	...	82.0	55	...	72.0
Orleman-Robinson	29	86.0	48	...	93.0	60	...	80.0	33	...	69.6
Potter (Alf)	7	86.0	71	...	98.6	46	...	78.0	58	...	66.0
Groat	12	100.0	76	...	94.7	36	...	70.0	51	...	40.0d
Berghausen	..	.....	16	...	93.0	9	...	88.0	6	...	66.0
Total	208	87.5	570	...	94.7	402	...	82.8	474	...	64.6
Grand Total	416	88.0	1239	92.0	96.0	857	74.0	83.0	779	54.0	66.3

a—Includes very early cases.
b—Majority under treatment.
c—Untreated.
d—Includes latent cases.

W.—Wassermann method.
N.—Noguchi method.

Craig in his latest tables, using cholestreins antigen, has the following figures:

Combined Noguchi System (Craig)⁵⁷. Using Inactivated Serum, Wassermann Antigen and Noguchi Hemolytic System.

Stage.			Cases.			Per cent		
			Positive.			Negative.		
			Positive.			Positive.		
Primary	908	815	95	89.5	815	95	89.5	815
Secondary	1,889	1,817	72	96.1	1,817	72	96.1	1,817
Tertiary	638	558	80	87.4	558	80	87.4	558
Latent	1,173	790	383	67.3	790	383	67.3	790
Cerebral	28	25	3	82.2	25	3	82.2	25
Parasyphilitic	22	15	7	68.1	15	7	68.1	15
Total	4,658	4,018	640	86.2	4,018	640	86.2	4,018

Stage of Disease.			Number of			Percentage		
			cases.			positive.		
			cases.			cases.		
Primary	747	667	747	667	89.2	80	89.2	80
Secondary	1,582	1,518	1,582	1,518	95.9	64	95.9	64
Tertiary	521	458	521	458	87.9	63	87.9	63
Latent	917	598	917	598	65.2	319	65.2	319
Congenital	28	25	28	25	82.2	3	82.2	3
Parasyphilitic	22	15	22	15	68.1	7	68.1	7
Total	3,817	3,281	3,817	3,281	85.6	536	85.6	536

The literature teems with tabulations and statistics upon the diagnostic value of the Wassermann reaction. Taking up first the tables upon general syphilis we find the widest variation. The most startling divergence of opinion is with respect to the time of appearance of the reaction after the primary lesion has developed. Bayly¹ says, "Primary cases in which the lesion has been present less than a fortnight almost invariably give a negative reaction, while 75 per cent of the positive reactions are obtained if the sore has been present for over a month." He gives the figures of various authors, which are given in a composite table below. Boas⁴ gives four weeks after infection as the earliest time the reaction can show in the serum, but, he says, Bruck, Stern and Lessing have reported very early reactions. He examined 76 cases, the earliest positive four weeks after coitus, the latest twelve weeks. Twenty cases were negative until the appearance of the secondary lesion. Marshall³⁴, "appears fifteen to thirty days after the appearance of the chancre. The earliest reported case is five days after the chancre." Morris, Moore, Powers and Mott³⁷, "Usually not positive until five to eight weeks after infection, when the disease has ceased to be local. . . ." von Gonzenbach¹⁵, "Does not appear, as a rule, until the sixth week after infection. Bruck and Neisser confirmed this by experiments on monkeys. . . The author examined 126 cases and got 69.9 per cent positives and 25 per cent negatives. . . The percentages of different authors vary from 8 to 90 per cent. . . . Before the end of the sixth week a negative reaction does not prove anything." Muller³⁹, "thinks the reaction does not appear before the fifth week." Some authors give an earlier date. Fritz Lesser saw a positive reaction before the appearance of the primary lesion, and Bruck saw a similar case, but Muller from his experience with 1,320 cases of initial lesion does not believe these cases to be authentic; there must have been a mistake in the history. Fischer, Gross and Volk, Ledermann, Bruns and Halberstaedter and Bruck are all agreed that the reaction is not positive until the sixth week. Kolmer⁶⁴ says, "As a general rule, the WR becomes positive during about the

seventh to eighth week after infection, or just a week or two before the onset of the secondary eruption. . . . In general, in primary syphilis the WR will be positive in about 80 per cent of the cases; where cholesterinized extracts are used as antigens, or with the Noguchi system, using active serum, the reactions are secured earlier and in a larger percentage of cases. . . . A negative reaction does not exclude syphilis, and, if it is at all possible, a microscopic examination, using the dark ground illuminator, should be made for the treponema."

On account of the great opportunities afforded the Army Medical Corps for studying the appearance of the reaction in primary lues, the following table of Craig and Nichols⁵⁶ should be interesting:

Date of the Appearance of the Wasserman Reaction in 575 Cases of Primary Syphilis.

Stage.	Cases.	Positive.	Negative.	Per cent Positive.
1st week....	76	26	50	34.2
2nd week....	149	86	63	57.7
3rd week....	151	102	49	67.5
4th week....	159	121	38	76.1
5th week....	40	32	8	80.

From this table one can construct a mnemonic, using the figure of the present week as the divisor and that of the week preceding as the nominator; e. g.: fifth week 4-5, or 80 per cent.

There is more agreement among authors as to the percentage of positive reactions in the secondary stage. Morton³⁸ sums up the figures of various authors without reference to treatment at 95 per cent, so do Marshall³⁴, Morris and collaborators³⁷, as do also other authors of text-books. Bayly¹ compiles figures that sum up a percentage of 90, including known treated cases. Boas⁷ finds it practically constant in **first attacks** of secondary syphilis. Von Gonsenbach's¹⁵ own figures are 98 per cent, Muller's³⁹ own results in 510 cases showed complete positive in 94.5 per cent, moderate positive in 3 per cent, weak positive in 1 per cent, negative in 6 per cent. Kolmer⁶⁴, says: "It is in untreated secondary syphilis that the remarkable specificity of the Wasserman reaction is so well demonstrated. . . . In untreated secondary syphilis the reaction is positive in from 92 to 100 per cent. With patients who have received some

latent syphilis give him 24.2 per cent strongly positive, 15.3 per cent weakly positive, 4.4 per cent incomplete hemolysis in one tube, 1.9 per cent questionable reaction, 54.2 per cent negative. The great variation in figures in latent syphilis is easily understood when we consider that there is no reliable method of differentiating latent from cured cases.

All authors agree to a very high percentage of positive reactions in cases of aortitis, aortic aneurysm, aortic insufficiency and visceral gummata, just where we must depend almost entirely upon the WR for diagnosis.

In congenital syphilis the appearance of the reaction depends very much upon the time at which the serum was taken. The syphilitic reagin may pass from the mother into the circulation of the child, thus giving a positive reaction without there being any active syphilis in the child. It is well known that the laws of Colle and Profeta can be explained solely on the ground of latency. There can be no immunity to syphilis without present infection. In manifest untreated congenital syphilis of children one year or over in age the WR is positive in from 97 to 100 per cent. In congenital mental deficiency the WR shows that syphilis is a frequent cause. For further data we must refer the reader to standard texts.⁶⁴

The Wasserman Reaction in Cerebral and Spinal Syphilis.

The literature on no subject shows greater confusion than the statistics on syphilis of the nervous system. Perhaps the best illustration of this is given in the great work of Scholberg and Goodall^{16a}. These authors give an extensive analysis of the results of fifty or more authors in an attempt to arrive at some common point of comparison. In these papers the authors collect results covering upward of 7,000 observations. In dementia paralytica both the blood and spinal fluid averaged 89 per cent, adding results of observers mentioning number of cases, and 82 per cent for blood and 76 per cent for spinal fluid where the total number of cases is not given. The authors say they have been unable to get such high results. Scholberg and Goodall tabulate the results of their own cases as follows:

	Blood		WR		Spinal		WR		Nonne-Apelt	
	Cases.	No. Tests.	Per Ct.	No. Tests.	Per Ct.	No. Tests.	Per Ct.	No. Tests.	Per Ct.	No. Tests.
General Paralysis	49	49	75.50	41	41.46	40	41.46	75	75	75
Suspected Paralysis	12	11	18.85	11	11.88	7	11.88	7	28.57	7
Dementia-Paralytica	29	15	100.							
Epilepsy	22	22	22.73	12	8.33	12	8.33	12	0	0
Idiocy or Imbecility with										
Epilepsy	17	17	41.17	3	0	3	0	3	0	0
Idiocy or Imbecility	29	29	27.6	1	0	1	0	1	0	0
Various Mental Diseases	23	17	23.53	8	0	8	0	8	0	0
Various Cases Syphilis	38	38	89.47							

The authors say these figures are far below those of the authors quoted in their tests, especially the spinal fluid. They consider that the Nonne-Apelt test is about as reliable as the WR.

In his later paper, Goodall¹⁶ finds the serum WR negative in over 56 per cent (mostly advanced) of 39 of his own cases, and the spinal WR negative in over 30 per cent. In other psychoses, out of 62 cases, the serum was negative in 11.29 per cent, the spinal in only 1.61 per cent. Using larger quantities of serum, he gets positives in over 75 per cent and in controls of tertiary syphilis, 89.47 per cent. Judging from his controls, it would seem that he uses a very conservative system and avoids sensitive antigens.

Bayly¹, who quotes several of the authors given by Goodall, testifies to the agreement of authorities that the serum WR is nearly always positive in general paralysis. Unfor-

tunately, here again we are confronted with lack of classification. Cases should be grouped according to stage, activity of disease, amount of treatment, etc. For *tabes dorsalis*, he says the blood is positive in 60 per cent and the spinal fluid in about 50 per cent of cases. In cerebral syphilis, he says (in agreement with many authorities): "The reaction is usually positive in the blood and negative in the spinal fluid." Muller³⁹ gets very much larger percentages. He says, "In *tabes* the average per cent of positives taken from a number of authors is 75 per cent." Muller's own results in 468 cases were: completely positive, 60 per cent; moderately positive, 10 per cent; weakly positive, 12 per cent; negative, 16.6 per cent. "The positive reactions in progressive paralysis vary from 90 to 100 per cent, depending on the material examined and the method." His own 386 cases gave 379 positive reactions. All of Boas⁴ untreated cases of *tabes* were positive, whilst his treated cases gave about 50 per cent positive reactions. He quotes Citron and Nonne as finding the blood more frequently positive than the spinal fluid, whilst many other authors find the reverse. Later figures, from tests made upon larger quantities of spinal fluid show very much higher percentages. After consulting many authors, the following table of Bayly seems to strike about the average:

Bayly Table 3—Relation Between the Diagnosis of *Tabes* and General Paralysis.

	Diagnosed as <i>Tabes</i> .				Diagnosed as General Paralysis.			
	Serum.		Cerebro-Spinal Fluid.		Serum.		Cerebro-Spinal Fluid.	
	Number of Cases.	Per Cent Positive.	Number of Cases.	Per Cent Positive.	Number of Cases.	Per Cent Positive.	Number of Cases.	Per Cent Positive.
Noguchi.....	205	60	11	54	61	65	60	73
Marie and Levaditi.....			9	66				
Wassermann.....			15	53			35	94
Mott, Chandler and Henderson-Smith.....							64	92
Bayly.....	50	60	20	45	20	85	8	87
Plaut.....					150	100	150	96

From all statistics studied, it is apparent

that the German authors give the highest percentage of positive Wassermann reactions, both in general syphilis and that of the nervous system. The table of Noguchi (*vide supra*) should be referred to for further tabulation on the WR in syphilis of the nervous system. It seems apparent that, except in *tabes*, the blood serum is the fluid of choice. Whenever either fluid gives a negative, a test should be made on the other.

For other methods of examining the blood for syphilis the reader is referred to standard works on immunology and serology. Jones,^{23, 24} gives a complete digest of the various precipitation tests. The percentage of positives in controls, especially in tuberculosis, is very high.

Examination of the Spinal Fluid.

The spinal fluid can be examined by means of the Wassermann test, the various tests for globulin or other proteids, and the cell count. A complete digest of the literature giving tabulation of results eliminates from discussion all except the pleomorphism test by the Fuchs-Rosenthal method, the Ross-Jones' modification of the Nonne 'phase I,' the Lange method with colloid gold, and the Wassermann test. Only the latter can be regarded as reasonably specific. All three of the others, however, have a high degree of diagnostic value.

The spinal fluid has been studied by many authors with respect to the appearance of the WR without evidences of syphilis of the nervous system. Bergl and Klausner² report thirty cases, four of primary, twenty-two secondary, two tertiary, one latent and one congenital, all positive, WR in blood. Sixty per cent gave increased cell count, 10 per cent also positive phase I, 13.3 per cent spinal WR. Swift and Ellis⁸ report 113 examinations in all stages from secondary eruption to general paralysis. Thirty-six per cent of the twenty-two cases showed some abnormality of the spinal fluid. They quote Ravaud's examination of the spinal fluid in 116 cases of secondary syphilis. In 67 per cent there was pleocytosis or positive phase I. Dreyfus found changes in all of twenty-two cases of secondary syphilis examined, but includes in this seven cases showing only increased pres-

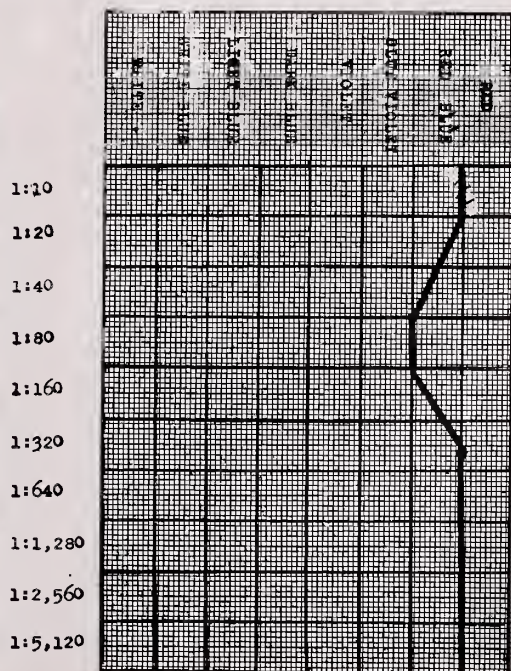
sure. In a later paper he reports 80 per cent of cases of secondary syphilis showing changes. Wechsellmann, basing his opinion chiefly on the results of the colloidal gold reaction, states that the majority of cases of syphilis show increase of protein content of the spinal fluid. Engmann, Buhmann, Gorham and Davis⁹ report a study of 100 cases. Of thirty-six early cases without active skin manifestation three gave a positive serologic finding; of sixty-four late cases twenty-one gave positive serologic results; of the 100 cases six had no symptoms of involvement of the nervous system, but the fluid reacted positively. Fraenkel, Max¹² examined fifteen cases of early primary and secondary syphilis and found a positive WR in five. Gamper and Skutezky¹³ quote various authors, some of which are abstracted here under other heads, some showing increased pressure and cell count as the earliest symptoms, next in order positive phase I, then the Lange test, then the serum WR, the spinal WR being positive only in well advanced cases. Cases are generally recognized earliest by a positive WR in serum in cases of manifest general symptoms. They report twenty-eight cases with strongly positive WR in the blood, the WR of whose spinal fluid was negative; 39.21 per cent had neither normal fluid nor clinical nervous symptoms; 27.57 per cent had symptoms and abnormal fluid, and 21.43 per cent abnormal fluid without symptoms.

Gutmann¹⁹ discusses this question and some of the literature. He reports on fifty-seven cases of primary and secondary syphilis tested by Nonne's four reactions. In forty-three cases of secondary, 28 per cent were pathological, or 56 per cent, if pressure is counted. The spinal WR was positive in only three cases. Hauptmann²⁰ collects figures from many authors and concludes: "A positive WR in the spinal fluid in the secondary stage of syphilis is an expression of a true syphilitic cerebrospinal disease and is not due to filtration through the meningeal vessels. The first manifestation of this meningeal affection is the presence of spirochete in the fluid, then an increase of lymphocytes and, in the severer forms, increase of albumin, and finally, positive WR. Wechsellmann⁹, in a

paper later than that quoted by Ellis and others, reports 221 examinations, 151 women and 70 men. Lumbar puncture was made before salvarsan treatment. Nonne's, Wassermann, Lange and Fuchs-Rosenthal tests were made; positive findings in 158. Of these, 98 had nervous symptoms, 60 did not. The fluid was negative in 63; 32 had symptoms, 31 did not.

Further consideration of the spinal WR is best taken up in parallel series with the other tests. Every spinal fluid should be subjected to the four classical tests. The WR should be made in serial strengths up to 1 cc of fluid, the minimum begin four times the amount of serum used. The Lange test is described in detail by many of the authors given in the bibliography, especially 17, 27, 35. The test cannot be recommended to the general worker, on account of technical difficulties. In the best hands it gives many ambiguous reactions. It is valuable, however, when taken in connection with the other tests. Space does not permit extensive quotations as to the opinions of the various authors. When colloid gold is added to very dilute solutions of spinal fluid, graded reductions, evidenced by color changes, down to complete "flaking out" occurs. Ten strengths, from 1:10 to 1:5,120 give a variety of reactions which are plotted as a curve, thus.

Chart of Case Secondary Syphilis with Headache



The Ross-Jones' modification of the Nonne test is practical for bedside work; it should not, however, be utilized except as a group test. Two cc of saturated aqueous solution of ammonium sulphate, Merck's guaranteed reagent, neutralized, if it has become acid, are placed in a test tube. One cc of spinal fluid is carefully overlaid and a haze or distinct white ring observed at point of contact. The precipitate should form within three minutes. The cell count is made with a special counting chamber. Directions go with the instrument. More than 15 cells per cm is pathologic. From 50 to 100 cells are found in tabes and paresis, mostly small lymphocytes. The fluid must be free from blood and the count must be made within one hour.

Nonne⁴³ sums up his conclusions in regard to the four reactions as follows: In general paralysis or taboparalysis the WR is positive in the serum in almost 100 per cent of cases. Phase I positive in about 95 per cent to 100 per cent; lymphocytosis usually marked in about 95 per cent; WR in the spinal fluid positive in about 90 per cent by the original method, using 2 cc, and in 100 per cent by using larger quantities. In tabes without combination with paralysis: WR in blood serum positive in about 70 per cent; phase I positive in about 95 per cent, usually strong; lymphocytosis in about 90 to 95 per cent, strong. WR in spinal fluid by original method positive in about 20 per cent; with larger quantities positive in almost 100 per cent. In cerebrospinal syphilis: WR in blood positive in about 70 to 80 per cent; phase I negative, only in exceptional cases, otherwise positive, but not generally so strong as in paresis and tabes; lymphocytosis, like phase I, almost always positive, but not so marked as in paresis and tabes. WR in spinal fluid positive in about 20 per cent by the original method, with larger quantities almost always positive.

Lange^{30, 31} gives results of tests by his reaction in 225 cases:

	Cases.	Positive.	Negative.
Cerebro-spinal syphilis	17	17	0
Tabes	20	20	---
Facial paralysis	1	1	---
Optic neuritis in early sec-			
ondary syphilis	3	3	---
Optic atrophy	3	---	---
'Paralysis'	18	18	---

Syphilitic apoplexy	3	3	---
Syphilitic deafness	3	3	---
Primary and secondary syphilis	3	3	---
Secondary syphilis	28	17	9
Latent syphilis	36	21	15
Tertiary syphilis	12	7	5

All others were controls and showed either the displacement upward of inflammatory conditions or a negative reaction. It is the earliest of the "four reactions" to appear.

DeCrisis¹⁰ finds the gold test constantly positive in 120 cases of general paralysis with characteristic curve, all of four cases of multiple sclerosis, two of chorea, two purulent meningitis, negative in 19 controls and one case of poliomyelitis.

Eicke⁷ gives the following table:

	Cases.	Pos.	Neg.	WR	Nonne.	Pleocyt.
Lues cerebri	25	24	2	24	24	24
Paralysis	52	50	2	50	50	50
Tabes	24	22	2	22	22	22
Pri. and sec. syphilis	136	60	76	4	60 slight 3 weak	60 slight 3 weak
Tertiary syphilis	8	3	5	0	0	0
Neurasthenia	23	20	23	0	26 strong	26 strong
Tub. meningitis	26*	1*	---	---	Strong	leucocytes
Brain abscess	1	6	---	0	0	0
Epilepsy	6	---	---	0	0	---
Other mental diseases	10	---	10	0	---	---
Paral. cranial nerves	4	---	---	---	---	---
Paral. abducens	2	2	---	---	---	---
Paralysis, facial	2	2	---	---	---	---

*Reaction by displacement upward.
**See comparison Goodall's tables.

Jaeger and Goldstein²² report 107 cases as follows:

	Lange Cases.	Strong.	Weak.	Neg.	4 Reactions.
Paralysis and taboparalysis	33	33	--	--	29
Lues cerebri	6	6	--	--	2
Tabes	12	6	6	--	7
Tubercular meningitis	1	1	--	--	Nonne and pleo
Epidemic meningitis	1	--	1	--	Nonne and pleo
Brain abscess	1	--	1	--	Nonne and pleo
Brain tumor	4	2	2	--	Nonne and pleo in 2
Other organic diseases of the nervous system	16	--	13	3	--
Epilepsy	6	1	4	1	--
Neurasthenia	10	--	--	10	All neg.
Functional psychoses	9	--	6	3	All neg.
Keratitis parenchymatosa	2	--	--	2	All neg.
Neuritis	3	--	2	1	All neg.
Neuralgia	1	--	--	1	All neg.
Muscular atrophy	2	--	1	1	All neg.

Thinks chief value of reaction in metaluetic diseases.

Grulee and Moody^{17, 18} give results in a small number of cases of congenital syphilis. They conclude that it is of value only as an aid in diagnosis. Salomon and Koefel⁴⁶ on basis of 135 tests conclude that the reaction is reliable in general paralysis. Of 53 cases giving negative WR and no other indication of syphilis 18, or 33.9 per cent gave a reaction, mostly in the syphilitic zone. They think the test most valuable for differentiating tubercular meningitis.

Kaplan and McClelland²⁷, whose work should command the most respectful attention, conclude that they are unable to corroborate the results of others. The most marked reactions and typical curves occur in gen-

eral paralysis and taboparesis. In most cases of cerebral syphilis the reaction is positive, but the curve is not characteristic. In the majority of cases of tabes there is no reaction or only in the lower dilutions.

One of the most valuable contributions is the one of Miller and Levy³⁵, in which they give a digested report upon 165 comparative tests, of which the subjoined is a classified summary:

	Cases	Bl.	Was Sp.	Was	Phase I	Pleo-cytosis	Lange		Zone
							+	-	
Miscellaneous Group	60	0	60	--	56	6	16	44	Variable mostly in lower dilutions.
Purulent Meningitis	4	--	--	4	4	4	4	0	"Displacement upward."
Tubercular Meningitis	7	1	6	1	6	7	7	0	Upper inconstant.
Congenital Syphilis	10	10	0	1	9	3	8	2	Luetic zone.
Secondary Syphilis	5	5	0	0	5	1	3	4	Luetic zone.
Tertiary Syphilis	11	9	2	1	10	0	4	7	Luetic zone.
Tables Dorsalis	10	6	4	7	3	7	5	0	Luetic zone.
Cerebro-spinal Lues	15	12	3	8	7	12	8	2	Luetic zone.
General Paresis	43	39	4	47	2	49	43	0	Paretic zone.
	(49 six not done.)								

They do not consider the test diagnostic in purulent meningitis. The test, they say, has no advantage over other tests in congenital syphilis. In secondary and tertiary lues it is inconstant. It gives a positive reaction in the majority of cases of tabes and cerebral syphilis; in spinal syphilis the test is not character-

istic. The reaction in general paresis is characteristic.

Lee and Hinton³² tabulate the results of their tests as follows:

MORPHIN-HYOSCIN ANALGESIA IN LABOR, WITH REPORT OF CASES.*

By J. W. Brandau, M.D.,
Clarksville, Tenn.

	1	2	Bld. Wass.			Sp. Wass.			Cells.		Globulin.			Lange.		
			+	—	×	+	—	×	+	—	+	×	○	1	2	3
Tabs.	24	28	4	12	6	11	1	—	10	11	7	10	—	1	2	3
General Paresis.	12	17	8	3	1	10	1	—	10	1	1	1	1	28	—	—
Cerebro-spinal Syphilis.	8	10	3	3	2	6	2	—	8	1	7	1	1	16	1	—
Cerebral Syphilis.	3	3	1	2	—	3	1	—	1	1	—	2	—	3	—	—
Spinal Syphilis.	4	5	3	—	—	3	—	—	3	1	1	1	—	3	—	—
Mental Diseases.	8	8	2	6	—	1	7	—	4	4	3	5	—	3	5	—
Tubercular Meningitis.	4	5	1	1	—	—	1	—	4	—	—	—	—	—	5	—
Purulent Meningitis.	4	4	—	—	—	—	—	—	1	—	—	—	—	—	4	—
Epidemic Meningitis.	1	1	—	—	—	—	—	—	1	—	—	—	—	—	2	—
Influenzal Meningitis.	1	1	—	—	—	—	—	—	1	—	—	—	—	—	1	—
Brain Tumor.	2	2	2	—	—	—	—	—	—	—	—	—	—	—	1	—
Poliomyelitis.	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Epilepsy.	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Syph. other than nervous system.	8	9	4	1	3	—	8	—	2	5	4	4	—	4	—	—
Cases giving conflicting reactions.	7	10	—	5	2	—	7	—	2	—	1	3	—	7	—	3

EXPLANATION OF FIGURES AT TOP OF COLUMN.

1—Number of cases.

2—Number of tests.

Lange 1=Typical reaction.

Lange 2=Reaction but not typical.

Lange 3=Negative reaction.

Bl. Wass.—Wassermann test with patient's serum.

Spl. Wass.—Wassermann test with spinal fluid.

+ Positive reaction.

— Negative reaction.

○Weak reaction.

×Reaction not made.

(To be continued.)

Since the art of medicine has been practiced it has been one of the problems of the profession how to relieve the pain of childbirth. Narcotics were given by the ancients. In later years chloral, antipyrin, and other drugs were used. Hypnotism was employed and recommended for a time, especially by French obstetricians; but it was found that many patients were not susceptible to hypnotic influence. Regional anesthesia by spinal cocainizing came, and as De Lee says, fortunately quickly went. It was found impracticable and unsafe. Cocaine applied locally to the cervix and vagina was advocated for a time, but it was found to be inefficient. Sir James Y. Simpson was the first to use ether in obstetrics, in 1847. In the same year he discovered the anesthetic properties of chloroform, and advocated its use in labor. But the objection to the employment of these anesthetics is that they are not as free from danger as was at first supposed; that they can be safely administered only for a brief period; and should be employed, if at all, only in the latter part of the second stage of labor.

Morphin-hyoscine (or scopolamin) anaesthesia was first employed in surgery in 1899, through the recommendation of Schneiderlin, a neurologist. Steinbuchel in 1902 first recommended its use in labor. Gauss, of Kronigs Clinic in Freiburg, in his first paper on the subject in 1906, reported five hundred cases in which morphin-hyoscine anesthesia was used with relief from pain and perfect safety to mother and child.

It was Gauss who gave it the name of "dammerschlaf," or in the English "twilight sleep."

Jacob Heller, in the Nashville Journal of Medicine and Surgery for November, 1914, reported one hundred and fifty cases studied with the medical staff of the Jewish Ma-

*Read at meeting Tennessee State Medical Association, Nashville, April, 1915.

ternity Hospital. Of this series one hundred and thirteen were primiparae, one hundred and forty-eight were vertex presentations, one hundred and thirty-one delivered themselves spontaneously, and nineteen were artificially terminated. The number of forceps deliveries, it is stated, could have been reduced to six, the other thirteen having been done for the convenience of the attending.

Kronig lays much stress on the fact that this anesthesia reduces the percentages of forceps deliveries, for the reason that with the pain and the consequent exhaustion removed, there is no risk in allowing the patient to take a longer time to deliver herself. In Heller's series of one hundred and fifty cases the average duration of labor in the primiparae was eight and a half hours, reckoning from the time of admission to hospital. The average time for the expulsion of the placenta was twenty minutes. There was no postpartum hemorrhage. There were two cases of nephritis, one of which culminated in convulsions six hours after delivery, but both made good recoveries. There were two cases of chronic endocarditis, both of which passed through labor in safety. Siegel of Freiburg states that in his experience there is prolongation of labor of about one hour in the first stage, and thirty-three minutes in the second; but Heller reports that from the softening and relaxing effect of this anesthesia on the cervix and lower uterine segment, the first stage is actually shortened. The second stage, he admits, is somewhat prolonged, on account of the partial absence of voluntary effort.

There are no contraindications to the employment of this anesthesia except such conditions as would ordinarily contraindicate the use of morphin or hyoscin, and it may be used in practically all cases when the severity of the pain demands it. It has been suggested by Gauss that this anesthetic should not be administered near the termination of the second stage, as cyanosis of the child is more likely to occur. His experience, however, has shown that while cyanosis and slowness of respiration may occur, deaths under this anaesthetic are fewer than when no anaesthetic is used, or under ether and chloroform. He reported one thousand cases delivered under morphin-hyoscin anesthesia with an infant

mortality of twenty nine; whereas, in one thousand cases recorded before the adoption of this anesthesia, forty-nine of the infants died.

This form of anesthesia, as in the case of ether and chloroform, may be administered to the obstetric or surgical degree. In the former, or morphin-hyoscin analgesia, the patient is never unconscious except when allowed to doze between pains, but responds to questions or to demands made upon her when voluntary effort on the part of the patient is necessary. A small amount of chloroform or ether may, if needed, be administered as the second stage of labor is being completed.

The result of this treatment is that the patient is rendered comparatively comfortable; she sleeps quietly between pains, the uterine contractions causing only slight facial expressions of pain.

This state continues until the labor is terminated, when the mother falls into a quiet natural sleep which may last from one to three hours, and she awakens free from shock or exhaustion, regardless of how protracted the labor has been; and usually does not realize that she is through with her confinement.

Of one hundred and twenty-two cases recorded in my own series there has been no mortality among the mothers, but an infant mortality of four. Two of these were cases of spina bifida; one a forceps case in which the child died after two days from convulsions, probably due to subdural hemorrhage; the fourth was still-born from the effects of a severe accidental hemorrhage about eight hours before delivery, which occurred two weeks before term. Examination of the placenta showed that about one half had been prematurely detached from the uterus. The case was seen in consultation with Drs. John Ross and Edward Ross.

The technique is very simple, and can be carried out by any practitioner in the patient's home. As soon as the pains become severe, regardless of the stage of labor, there is given a hypohermic injection of morphin sulphate gr. 1-8 to gr. 1-6, and hyoscin hydrobromate gr. 1-200 to gr. 1-150, according to the severity of the pains, and the suscepti-

bility of the patient to these drugs. In a protracted labor the injections may be repeated as indicated, usually in from two to four hours, and never more than three have been required in any case. Strychnin is added to the injections when the uterine contractions are lacking in force and duration; or pituitrin may be given when indicated at the proper stage of labor. A small amount of chloroform may be given at the termination of the second stage if needed.

A few illustrative cases are subjoined:

Case No. 1.

Mrs. R. E. M., age 23. Primipara. Vertex presentation, L. O. A. position.

Labor began about 6 o'clock a. m. July 27, 1907. Contractions were quite painful by 8 o'clock, and she was given hypodermically morphin sulphate gr. 1-8, and hyoscin hydrobromate gr. 1-200. The injection was repeated at 10 o'clock. Soon after this injection she became quiet, ceased to make complaint, and usually slept between pains until 5 p. m., when a third injection was given. Her labor terminated at 9 p. m., having been at no time entirely unconscious except when asleep between pains, yet she had very slight recollection of pain during her confinement.

The child, a male, weighed ten pounds, and was in every way normal.

Case No. 2.

Mrs. F. M. D., age 34, second confinement. First child six years old. Presentation vertex, position L. O. A. Pains began at 11 p. m. Oct. 1, 1914, and were moderate during the night until 5 a. m., when active labor began, and she was given morphin sulphate gr. 1-8, hyoscin hydrobromate gr. 1-200, and strychnin sulphate gr. 1-60. As she was a pronounced blonde the hyoscin flushed her skin quite profusely. In half an hour she became quite composed, the uterine contractions were slightly less frequent but improved in quality, and were only manifested by slight facial contortions, the patient sleeping from three to five minutes between pains. The second stage was completed at 7:25 and the third at 7:40. About two drams of chloroform was administered during the last twenty minutes of the second stage. Uterine contraction was firm,

but a half dram of fluid extract ergot was given, as usual, as a safeguard against hemorrhage. There were no afterpains and the patient cheerfully stated that she did not remember when her baby was born. The child weighed eight pounds and was in good condition.

Case No. 3.

Mrs. J. C., age 24, fourth confinement. Youngest child eighteen months of age. Presentation vertex, position L. O. A. First labor pains occurred at 9:30 a. m., March 14, 1914. At 1 p. m. pains were severe and she was making considerable outcry. Gave morphin sulphate gr. 1-6, hyoscin hydrobromate gr. 1-150, and strychnin sulphate gr. 1-60. In half an hour she ceased to complain and began to sleep between pains. Uterine contractions continued strong and regular and were almost unnoticed by the patient until the child was delivered at 2:20 p. m. The placenta came at 2:30 and the uterus contracted firmly. A small amount of chloroform was given during the last ten minutes of the second stage. The delivery was almost painless. The child, a male, weighed eight and three-fourth pounds, began breathing immediately, and was perfectly normal.

Case No. 4.

Mrs. N. C. R. Age 25. Primipara. Labor began March 1, 1915, at 2 a. m. Vertex presentation, L. O. P. position. Pains were well borne until 7:30, when she became nervous and complained of pain in the back of the neck. Morphin sulphate gr. 1-8, hyoscin hydrobromate gr. 1-200 and strychnin sulphate gr. 1-60 were given. In half an hour she became quiet, sleeping between pains, which continued regular and of good quality. At 3 p. m. there were indications of uterine inertia, when quinine sulphate gr. 3 and strychnin sulphate gr. 1-30 were given per os. This was repeated at 5:30. The pains improved and labor progressed satisfactorily. The os being fully dilated at 9:30, 1 cc. of pituitrin was injected. In ten minutes the contractions were much improved. The patient beginning now to show recurrence of the nervous symptoms, she was given at 9:30 morphin gr. 1-8, hyoscin gr. 1-200. Uterine

contractions continued good, but at 11:20, as little progress was being made and the head was in the lower strait, the short forceps was applied and the delivery completed at 12:15 a. m. March 2. (A second injections of 1 cc. pituitrin was given at 11:40). A small amount of chloroform was given after the forceps was applied. The placenta was delivered at 12:45, the uterus contracting well. Although this patient had been in labor about twenty-two hours there was little sign of exhaustion and she slept quietly and almost continuously until 6 a. m., when she took nourishment. The child weighed eight pounds and had an unusually large head. The cord was twice around the neck, and as might be expected, the infant was quite cyanotic, but was resuscitated without difficulty. Dr. W. H. Young rendered valuable assistance.

Case No. 5.

Mrs. J. O. M. Primipara, age 44 years, 4 months and 12 days. Vertex presentation. L. O. P. position. Pelvic measurements normal. Membranes ruptured February 7, 1915. Small quantities of liquor amnii continued to escape daily until labor pains began on February 21 at 2 a. m. Pains were irregular and not much complained of until 6 a. m., when morphin gr. 1-8 and hyoscin gr. 1-200 were given subcutaneously. This was repeated at 1 p. m. and at 7:40 p. m., with the addition of strychnin sulphate gr. 1-60. Uterine contractions continued good and labor progressed normally. The cervix was obliterated at 12 o'clock, and the os fully dilated at 9 p. m. The labor was terminated with short forceps at 1 a. m., February 22. The Placenta was delivered at 1:20. Uterine contraction was firm. The perineum intact. Dr. F. J. Runyon administered a small amount of chloroform after the forceps was applied, and otherwise rendered valuable assistance. The child weighed eight pounds, was slightly cyanotic, the cord having been around the neck, but it was resuscitated and is normal in every way. There was no secretion of milk, and the child is being fed artificially.

DISCUSSION.

A MEMBER: I would like to ask Dr. Brandau how many instrumental deliveries there were?

DR. BRANDAU: The number of instrumental deliveries was not more than the average. Of the cases I report, two of them were primiparae, and were delivered by the use of forceps. But in the whole number of cases, the forceps deliveries were not above the average.

DR. ANDREW L. RULE, Knoxville: I did not think I would have anything to say on the floor of this convention at this time, but it does seem to me that physicians doing obstetrics ought to take notice of such papers as this. The paper presented by the doctor is an excellent one.

I still believe in the good old-fashioned way largely. If you notice, the average length of time for confinement runs ordinarily about six hours. I believe the essayist stated in his cases it ran about eight hours. If morphin and hyoscin are going to cause a delay of two hours in labor, why should we use them?

Again, in the second stage of labor he says he has to resort often to pituitrin to bring on strong uterine contractions. If morphin or hyoscin causes relaxation and causes the uterus not to have the power it ordinarily ought to have, why use it? If you have to resort to chloroform or ether to deliver a patient, why use morphin and hyoscin? They may be all right in well selected cases, like pituitrin, but I still believe in the good old-fashioned way.

DR. J. H. BARNETT, Chattanooga: From the standpoint of surgery, there is some debate between our authorities at the present time whether it is best to use preliminary medication by morphin before the administration of an anaesthetic. It is true, in certain instances there are contraindications for such things; but, as a rule, I believe that it is almost inhuman to subject a patient to the terrors of excitement without preliminary medication by morphin-hyoscin, or atropin, morphin and scopolamin. There can be no lucid reason why the administration of these drugs to prevent pain in labor should not be used, provided you understand the patient and understand the drugs you have in hand. There is a humane principle extant today that has been adopted throughout the history of medicine. The first anaesthetic ever given to a woman in labor was by Simpson, and he was "churched" for doing so, and his argument was that God himself was at one time a surgeon and caused a deep sleep to fall on Adam to remove a rib, and the theologians turned him loose.

The application of common sense is a pretty good rule in our various divisions of the healing art whether it is in obstetrics or not. It is indeed pleasing to me to see obstetricians considering patients as they are. It is said that twilight sleep prolongs labor, but what if it does? It is just as easy to relieve a woman by forceps if she has had hyoscin as it is if she has not. The head is supposed to come through the pelvic canal. I believe in the slow use of forceps, and not in biting the child's head with the instrument as though one

was in a dog fight; the instrument should be used with judgment. By placing the forceps properly, you know you are right, and then you can proceed slowly to deliver. I believe that I could demonstrate by physical laws forceps are indicated a hundred times more than they are used. I would make a plea for the use of forceps. I think it is a very hard thing to push a body that has resistance like a child's head through a canal that is shaped like the pelvic canal, and it would be better to have the pull and push together. I believe in the use of forceps and in proceeding slowly, and helping the mother by physical laws.

The doctor spoke of postpartum hemorrhage. Recently, in a meeting of the Chattanooga Medical Society, we had a paper of this nature and postpartum hemorrhage was one of the points that was brought up. If you think for a moment; a postpartum hemorrhage is not of any more consideration than a hemorrhage from any other part of the body. If the parturient woman begins to bleed, we will have in the majority of cases a tear in the cervix. You can apply the volsellum, bring the cervix down, where you can see. By the use of a ligature, you can run a large curved needle around the whole tear and the postpartum hemorrhage will cease. I do not believe there is ever an important hemorrhage from the uterine attachment of the placenta. There is some hemorrhage from this point, but there is no direct connection between the placenta and mother, so far as the blood supply goes. The other point that bleeds is the torn perineum and it can be restored instantly. I am sure the great bugaboo postpartum hemorrhage is of little importance when looked upon with a modicum of common sense.

DR. JOHN S. BEASLEY, Covington: I cannot agree with my Chattanooga friend in regard to the humane aspect of relieving a woman of pain incident to labor. It was intended for a woman to suffer a certain amount of pain at this particular time, and I certainly agree with Dr. Rule in stating that we will prolong labor by using hyoscin and morphin. All the old practitioners, those who have practiced medicine a long time, know that when you have a case in which the os is dilated to the extent of one-half dollar, you can give the patient a good dose of morphin, make two or three calls, and return in time to see the performance ended. Morphin will work that way alone, in addition to a sedative like hyoscin. However, hyoscin is not always a sedative. Hyoscin in quite a number of cases would have the reverse action. Instead of producing sleep or quietitude, you would produce just the opposite effect. In these cases you certainly need to do the wise thing, but hyoscin does not overcome any of the depressing effects of morphin. When you give morphin you give a drug that checks secretions; you give a drug that quiets the uterus, and you may have a case of eclampsia develop after giving large doses of morphin. Your indication, then, of course, would be eliminative treatment,

and you are going to have an antagonistic action between the purgatives and between your diaphoretics and between your eliminants you will have just the reverse action and antagonistic action. Therefore, I would suggest and believe that so-called "Twilight Sleep" should be condemned, and I believe instead of saying it is inhuman for a woman to suffer it is still more inhuman to let infants die.

I tried this method in twelve cases. In three cases out of twelve the infants died, which means a mortality of twenty-five per cent. I know this is a high mortality. None of the infants were deformed in any way. I could not attribute the death of one of these infants to anything else unless it was the effect of the morphin and hyoscin. One was a nine-pound boy, well developed, and evidently died from the effects of the morphin and hyoscin. It is more rational to give a woman suffering a few whiffs of chloroform and go on until you get the beginning of the second stage of labor when the os is fully dilated, then give a dose of pituitrin. It is like pulling teeth, you only let the patient suffer pain a few minutes and she is over with it. Instead of preventing hemorrhage, you get the system loaded with sedatives, like morphin and hyoscin, and you invite a postpartum hemorrhage, necessitating additional measures to prevent it. That is a good place in which to use pituitrin. If you wait until the os is fully dilated, provided that there is no abnormality of the passage or passenger, you can give pituitrin, and that will cause firm contractions of the uterus and save giving ergot or ergotin immediately after the delivery of the child, and you will prevent postpartum hemorrhage by giving this drug.

DR. HAZLE PADGETT, Nashville: I do not know whether I misunderstood Dr. Brandau or not when he referred to postpartum hemorrhage in which he rather had the experience of minimizing the danger, and in which he explained the flow of blood from the torn perineal body that could be repaired quickly, or whether it was a torn cervix which could be repaired, bringing it down in this mechanical way and applying the art and science of surgery to control the hemorrhage. But there is one thing that is very impressive and that is this: From the anatomy of the part we realize the fact there is no blood vessel in the perineal body large enough when torn to bleed a patient to death; there is no blood vessel in the cervix when torn that will bleed the patient to death in five minutes or ten minutes, practically rendering the woman bloodless. And again, when you take a woman who has come to her death by postpartum hemorrhage, on making an autopsy you will find the cervix is either not torn or torn so slightly that the hemorrhage coming from it is insignificant, and the perineal body is intact. Where else on earth could that hemorrhage come from except from the attachment of the placental part?

DR. BRANDAU (closing): Dr. Rule believes in

the old-fashioned way. I do not think Dr. Rule would believe that if he had experience with this method; and I do not believe he would do surgical operations in the old-fashioned way either.

I think we are doing legitimate practice when we lessen the pains of our obstetric patients without doing harm to the mother or child. I do not give these remedies in the large doses that are used in the German clinics, but I give what I prefer to call doses to the obstetric degree, or analgesia. You render the patient comparatively comfortable without getting any of the bad effects of the drug in any way.

A great many of our cases of obstetrics are not physiological; many of them are pathological, and this makes it more necessary to use some drug to help them through labor. There are some patients who complain so little that nothing is necessary, especially multiparae. In my experience the first stage of labor is actually shortened, there is a relaxing effect upon the cervix, and for that reason we have less cases of laceration. In a hundred and twenty cases I have not had a laceration of the cervix or perineum. I used pituitrin in two cases, and these patients would have had to have pituitrin if analgesia was not used. We are able to preserve the strength of the patient in a remarkable degree.

One of these patients was forty-four years of age, and was in labor twenty-two hours. She was a delicate and nervous woman, and would have been exhausted from pain before delivery could have been completed if it had not been for this analgesia.

I wish to thank Dr. Barnett for his kind remarks about the paper.

Dr. Beasley spoke of increasing the duration of labor. In my experience I could not say that the entire labor has been increased or diminished, but I do know that the first stage of labor has been shortened. I think possibly that the second stage has been a little prolonged, but I think we ought to be willing to give more time if we do have a prolonged second stage of labor if we can by this means prevent the patient from suffering the pains incident to labor.

As to the question of eclampsia, I have not met with a case in the series. As to infant mortality, there were two cases of spina bifida, which are practically always fatal. One died from subdural hemorrhage. That child would have been lost any way, in my opinion. Another died from accidental hemorrhage, which occurred before the anaesthetic was administered. So I think four fatalities in one hundred and twenty cases was not quite as low as the normal mortality to infants in confinement. There was no case of postpartum hemorrhage.

In reply to Dr. Padgett, the cervix was not torn in any one of these cases, nor was there any laceration of the perineum.

MEDICAL ORGANIZATION—THE COUNTY MEDICAL SOCIETY.*

By J. G. Rawlins, M.D.,
Dancyville, Tenn.

Recognizing the fact that no material reform nor advancement can be accomplished by individual effort, the medical profession has at last become aroused to the necessity of immediate and thorough organization. Medical organizations differ from all other organizations in the fact that they are not effected for selfish nor self-protective purposes alone. Its objects are broad and humanitarian—the advancement of medical science, the prevention and cure of diseases, and the suppression or restriction of such evils as degrade the human race, either physically, morally or mentally. What other order of men would use every means at their command, either mental, physical, or financial, to accomplish purposes that would bring about conditions which would result in a diminution of their incomes, except the medical profession? This profession is every day giving to the public and their fellow citizens valuable services which have no personal reward in them, but which advance the good of others, and contribute to the welfare of the community.

The earnest efforts being made to advance the standard of medical education and to suppress charlatanry and quackery, are not so much for the benefit of the medical profession, but to protect the lives and health of the innocent sick who may become their prey. Why should not the citizen's health and life be as great an object for state protection, as is the money, or financial interests? 'Twas well said, "Who steals my purse, steals trash; 'tis something, nothing; 'twas mine, 'tis his, and has been slave to thousands; but he who filches from me my good HEALTH, robs me of that which NOT enriches him, and makes me poor indeed."

The county medical society represents the pioneers of the medical profession—that large class of general practitioners who are working

*Read before the Fayette County Medical Society.

out the great problems at the bedsides of the sick. Upon this class and the county medical organizations, devolves the duty of elevating, educating, and purifying the profession. Our state and national organizations represent a high standard in scientific medicine, but any and all reformation and elevation either in ethics or education must come through the influence of the general practitioner and the county society.

To purify the fountain, you must commence with its tributaries. Whenever a state has its county societies well organized, it is in a position to ask, or even demand, any legislation desired.

The time has arrived when the well conducted medical society holds the relation of the post-graduate course to the profession, and the question is no longer asked, "What school is your Alma Mater?" but, "To what medical societies do you belong?" The knowledge gained in the medical society, although the papers may be to a certain extent theological and technical, is of a practical kind. Such articles in medical journals or text-books represent but one man's—the author's—views and experience, but when read before and discussed by a body of medical men, one member adding a plume of experience and another plucking a quill of fallacy, you will frequently find the bird quite of another feather, and at times a representation of the Anserine, rather than the Gallinaceous family.

Medical legislation to be effective, must be preceded by the education of the people upon medical subjects, and this duty devolves upon the general practitioner and family physician. When neighboring physicians are of one mind, and recognize the contagious or infectious nature of certain diseases, and how much infection is transmitted, then, and not till that time will the laity become aroused to the prevention of disease rather than its cure. The same can be said of laws prohibiting the use of narcotics and alcoholics—such laws will become much more effective when the people become educated to their evil effects.

The laity are eager for medical information, and while "a little learning may be a dangerous thing," it is more dangerous if not of the proper kind. Their knowledge upon medical subjects should come from the best medical

authorities, and not from quack medical advertisements and almanacs. They are already looking to the discussions and conclusions in our medical societies as authentic, when accessible. I have been closely observing the health articles, or "How to Keep Well," by Dr. W. A. Evans, and printed in the daily Commercial Appeal, and consider them high-class, ethical and trustworthy, and should receive our hearty commendation. The literature which comes to our homes and firesides should be rigidly censored, and the sensational, immoral, quack advertising sheets excluded. A large part of humanity are credulous and believe everything they see in print, especially in their church papers, and when they read of a sure cure for consumption, or cancer, or Bright's disease, and reports of cases claimed to have been cured, after the failure of the most eminent medical men and the expenditure of thousands of dollars, sandwiched in between editorial matter and gospel truths, they are more than likely to accept the advertisements as one of the truths—or at least that the editor endorses the great "Dr. Jonkermon's," or some other "sure cure"—order a bottle, lose the precious time and treatment in which a cure might have been effected, go to the grave dope fiends. The editors of all such papers should be advised of the immense harm these advertisements produce. Why preach truths on one page, and advertise *disguised* falsehoods upon another? Our best papers and periodicals are now excluding such advertisements, and it will soon be universally the case that the standing and character of the journal or paper will be judged by the advertisements it contains.

Since the re-organization of the Americal Medical Association, confining its membership to members of good standing in the county and state societies, the life and efficiency of the county societies become objects of special solicitude in order to give the state organization its proper representation in the national society, and how best to foster and sustain them is one of the most vital questions in state organizations; hence a few thoughts on this line in discussing our subject—Medical Organization, and the Mission of the County Medical Society.

There are no fixed rules nor stereotyped

methods that will lead to success, unless the organization, and especially the secretary has the earnest co-operation of the entire membership. Nothing kills a society so quickly as a want of interest, irregular attendance, and deficient programs. The subjects chosen for discussion should correspond with their season of prevalence, and as it would require too much time and be too great a burden upon one member to cover some subjects in extenso, it would be well enough to make a symposium of the subject, giving to different members different divisions of the subject, so that it could be more thoroughly studied, and discussed at one meeting, which would be more profitable than a series of articles upon the same subject running through several meetings.

In the selection of subjects, we are apt to overlook a large number of diseases and conditions worthy of investigation, in search of novelties, rare diseases and capital operations, forgetting that our old foes are still in the field in the form of malarial and typhoid fevers, pneumonia, diptheria, etc. We still see their names frequenting the mortuary reports, especially in the other fellow's practice, for their are yet a few physicians alive who never lose a case.

The social meeting should not be neglected, for these are more potential in creating a harmonious and united fraternity than any other. Let us throw physic to the dogs, at least once a year, and meet at some pleasant place with our wives and families, or best girls, and get better acquainted. By such meetings, we will feel better, get better and live longer. Be sure you knock on Rip Van Winkle's door when occasions occur, as it may be possible to break his procrustean environment, entice him out, and make a wide-awake member of him.

THE MEDICAL SOCIETY AND ITS OFFICERS.

By H. P. Larimore, M.D.,
Chattanooga, Tenn.

The secretary is the most important officer in the County Medical Society, and, upon the efforts that he puts forth, spells in large measure the success or failure of the society.

It is surprising what a live, wide-awake and competent secretary can accomplish, and the enthusiasm he can create. He must not expect to have these efforts fully appreciated either—it is rather a self-sacrificing work.

A medical society is usually a one man affair in so far as the executive duties go. Here work, well and thoroughly done, will insure two results:—a full commendable attendance of members and visitors, and the presence of your program material. All non-affiliated, eligible physicians in your territory should receive the same notices of meetings and the same literature as your members. Indeed, you should really devote more time and effort on the individual non-affiliated man—he may have reasons for not joining other than financial stringency. A continuous interest in this doctor will more than likely eventually cause him to join.

The more postage you use the better society you will develop. Spend to the limit of the income to get results. If you accumulate a balance of any consequence, the members will only "resolute" it away and thereby cripple your work. Attractive, well-printed programs, containing the list of your members, is a good investment, and every doctor should receive copies. These programs can be made a yearly publication, or, what is better, arranged for six months only. In any event, a new list of members should be printed every six months, as many changes occur, such as removals, deaths, changes of address and addition of new members. The sooner you can get a new member's name printed along with the rest, the better—especially in the case of a young, newly-located practitioner.

Beware of the member who is always "looking up the constitution and by-laws." He is usually up to some mischief. But, you cannot always squelch this type of member or prevent him by advice from disturbing the society. At least, don't encourage him in his attitude. There will always be some members whom you cannot please, or who are displeased with the society or its work. But, he is always in the decided minority, and, if you keep your work well up, he can cause no trouble of consequence.

Essayists should be given ample notice of

the approaching date for their essays, encouraged to put forth their best efforts, and, in the case of their first essays, where embarrassment or lack of ability exists, to aid them in all ways. Well prepared case reports and histories are of great value and should be encouraged and sought for.

Therefore, if you, Mr. Member, are inclined to bestow praise or offer encouragement, let the secretary be the chief recipient of same.

The president can be of great help to his secretary, or he can greatly embarrass his work. The president should expedite business and discussions, and should call on a different man, or at least alternate his men, to open the discussions. Even this little matter is important. He should not show partiality, and, above all, should attend regularly. While he nominally is the head of the local profession, yet his office should not be of an executive nature, but should be regarded as wholly honorary. He changes from year to year, while the secretary may hold office over several terms.

The officers should do their utmost to keep out all extraneous business. It only causes confusion, takes time and foment trouble. A society can pass resolutions until dooms day and accomplish nothing thereby. The time of the society should be devoted entirely to a discussion of medicine and surgery and their allied branches, and the less "business" on the calendar the better for the harmony and betterment of the society.

Medical societies are and always will be the life of the profession. The medical profession in thus fostering societies differs from all other professions. This is due in a great measure to the science and practice of medicine and surgery being anything but an exact science, and to that inherent desire of every good and true doctor to want to know his fellow doctor. The medical society becomes, herein, the clearing house for scientific knowledge and the promotion of good fellowship. These results cannot be achieved through any other medium. The medical society furnishes the best means for the interchange of ideas and experiences, and the discussion and consideration of scientific and practical subjects pertaining to the daily

work of the individual doctor, and cannot but result in good. To get the broader view the physician must supplement his experience and reading by availing himself of every opportunity to learn from personal contact with other doctors. It encourages thoroughness—the keynote of success.

Every meeting of your society should be looked forward to with pleasure, and you should make every effort to attend. It will always be found true that the really busy men are present most regularly. It shows they are truly interested in medicine, and feel it their duty to attend. Something is learned at each meeting. The meetings help to keep you abreast with latest advances in medicine and surgery, and in a way you cannot acquire from the reading of text-books and periodicals—one should supplement the other. The two hours here spent each week serves as a rest—a recreation—a relief from business and professional cares. The doctor who enjoys the society of his fellow doctors is usually on the right road. Acquire, therefore, the good habit of regular attendance.

We will close by quoting Osler, who says, "The society helps to keep a man 'up to the times,' and enables him to refurnish his mental shop with the latest wares. It keeps his mind open and counteracts that tendency to premature senility which is apt to overtake a man who lives in a routine."

ECTOPIC PREGNANCY.*

By T. G. Pollard, M.D.,
Nashville, Tenn.

Ectopic pregnancy is a subject of interest to the profession at large at whatever time it is presented, as it endangers the life of the patient in whatever form it may assume, whether it be cornual, tubal, ovarian or abdominal. The tubal type is far the most common, and will be the form dealt with to a large degree in this paper.

Until the time Lawson Tait performed the

*Read before the Tennessee State Medical Association.

first abdominal section, January 17, 1883, for this condition, it was almost reckoned as a pathological curiosity, excepting in its later stages, when the symptoms become evident, or the fetus could not be overlooked. Cases existed in those days just as they do now, but not so frequently. Cases of pelvic hematocele reported cured at that time by rest, compare favorably with reports of tubal abortion today. The writings of Parry and the work and enthusiasm of Tait threw considerable light upon its pathology and symptoms.

Etiology.

The etiologic features present no little interest, and have been the source of extensive investigation and spirited contention. At the present the cause can be covered as demonstrated in three classes: First, those due to mechanical obstruction; second, those due to pathological changes in the tubal mucosa; third, those due to decidual reaction in the tubes.

The first class, mechanical obstruction, of itself does not appeal to us so much as it once did. Intrauterine pregnancy has been reported to follow ligation of both tubes. It seems reasonable that such a ligation would produce as much obstruction as would be produced by adhesions from various kinds as well as kinks from various pathological conditions adjacent to the adnexa.

The pathological class appeals to us most. The infections that produce this condition are perhaps many, but the chief one is the gonococcus. Mandl, Peterson and others claim that it has been the factor in at least two-thirds of their cases. This, of course, does not refer to the graver forms of gonococcus infection, for in such tubes pregnancy cannot occur, but to the milder types producing the so-called catarrhal or follicular salpingitis, resulting in a great number of cul-de-sacs, with destruction of cilia, for the lodgement of the ovum. At one time the most important pathological change resulting in ectopic pregnancy was thought to be the destruction of the cilia, but since cilia are often found in tubes containing sacs of ruptured cases, the view has lost ground. In addition to the pathological changes, clinical facts tend to substantiate the conclusion that the

most frequent cause of ectopic pregnancy is a previous salpingitis of gonorrhoeal origin.

Huffman, in studying specimens of ectopic rupture with a view of finding confirmation for the inflammation and obstructive theories, found evidence for a new working hypothesis. This hypothesis is that ectopic pregnancy is determined by an anomalous imbedding area. He was unable, however, to find any anatomical factors tending to produce an imbedding area, but assumed that the special tissue may become misplaced during the development of the tubes and uterus from the Mullerian ducts. He considers the problem physiological rather than mechanical.

Meyer, does not believe it to be a physiological condition, but believes that the chief factor is probably preceding inflammation. Clarence Webster attributes the implantation to the development of decidual tissue in the tubal mucosa, a condition abnormal in the tube.

Most interesting experimentation has been done to determine the truth or fallacy of the theory of decidual formation. The belief was advanced that tubal pregnancy could only develop when a decidual membrane was present similar to that in the uterus, but investigation has shown that the evidence of decidual reactions are absent, never abundant and usually imperfectly developed.

Prevalence.

The increased prevalence of tubal pregnancies is more definitely established than the causes. The theories advanced for this increase are: (1) trauma; (2) increased gonorrhoeal infections and unnecessary intrauterine manipulations during labor; (3) greater skill in diagnosis.

Diagnosis and Symptoms.

Before rupture an occasional diagnosis is made. In all probability the diagnosis would be more frequent if it was not for the fact that these patients fail to consult a physician about the pain or discomfort, which, as a rule, varies a little from the character or discomfort they have been accustomed to for years; for practically all of these patients have been sufferers from some menstrual derangement or some pelvic disorder. But if a woman whose men-

strual period has been regular misses or goes beyond her time, or if a flow begins in a period varying from four to five days to two weeks after the regular time and continues more or less regularly with accompanying periodic pains, pregnancy should be suspected. If, too, she has been sterile for some time and other subjective symptoms of pregnancy are present and on vaginal examination the cervix is found soft and a tender mass is felt in the region of the adnexa, the pregnancy is most likely extra-uterine. The diagnosis, however, before rupture will always be difficult, and on this account only a small per cent of the cases will escape the dangers of hemorrhage from rupture. When rupture takes place the diagnosis, while not so obscure, should never be considered an easy one. If all the cases presented the same symptoms or the well marked classical symptoms laid down in the text-book, we would not fall down so often. From the experience which I have had in these cases, I am led to believe that the well marked classical symptoms are not the rule. The symptoms we look for are usually outlined as follows: Occurring in a sterile woman, a sudden severe pain in the hypogastrium, fainting, nausea, vomiting, cold sweat, subnormal temperature, rapid weak pulse, tenderness over the lower abdomen, more particularly the ruptured tube, and a bloody discharge from the vagina. On vaginal examination we have marked tenderness on the affected side and if hemorrhage is large we detect a boggy mass, but if hemorrhage is small and intraligamentous the boggy mass may not be so typical.

In old cases the accumulation of large clots gives a sense of an irregular boggy mass which may fill the entire pelvic. Fever usually comes on later, from a few hours to a day or two. Leukocytosis is always present. Even with all the symptoms necessary for diagnosis at hand we are liable to fall into error. In right side rupture appendicitis is often the diagnosis, but a careful vaginal examination and a history of the type of colic, along with the constitutional findings, will probably put us right. Other common errors are mistaking tubal affections and incomplete abortions for an ectopic, and vice versa.

In reviewing a series of eight cases occurring in my practice in the last two years, I find but

one of them presented any alarming symptoms at time of rupture; they all had slight faintness and dizziness, but only one had collapse; the character of pain was periodic, but in only one severe enough to require an opiate; in one the pain was never located or complained of by the patient as being in the hypogastrium or pelvis, but in the epigastrium and above the umbilicus; in four there was some nausea, and in two, vomiting; in one, no history of the time at which rupture occurred could be obtained and it was only discovered in the course of an operation for the removal of an appendix. None of these cases were seen within five hours of the supposed rupture and only four had any show of blood at first visit. One case which was about a week old had no show; the other three showed within four hours. None were operated upon within twelve hours, and only one in shock of any consequence. All except one showed a rise of temperature, 100 to 102, the temperature, however, was not constant. The symptoms as outlined in above series are not given in an attempt to minimize the seriousness and graveness of these cases, because they all must be considered extremely dangerous to life, for many die in a short time before surgical treatment can be instituted.

Repeated or Recurrent Extra-Uterine Pregnancy.

It has been demonstrated beyond question that one ectopic predisposes to another, or it may be more correct to say that the existing pathology predisposes. Numerous observations prove that recurrence in some patients is not exceptional. It may occur in the tube which in the first pregnancy was uninvolved; in both tubes at the same time, or twice in the same tube. The most frequent cause is an inflammatory alteration of the tubes. The pathological changes are not intense and involve chiefly the tubal mucosa. Between two ectopic pregnancies there may be a normal uterine pregnancy.

The simultaneous bilateral pregnancies are rare, but the opposite tube should be examined before closure of the abdomen to verify this.

In a series of 1,000 cases collected from the practice of thirteen different surgeons there was recurrent in 3.9%. In a series of 2,999 cases reported by Smith, there have been 114

recurrences, or about 3.8%. Smith believed the percentage would be higher in cases where a patulous tube was left and social conditions were favorable to pregnancy. The average length of the interval was about thirty months, a considerable number having occurred in less than six months. In a small per cent of cases we may have a normal pregnancy intervening. I have had to come under my observation a case of this kind.

The great danger of ectopic gestation is that of hemorrhage following rupture of tube by the growing foetus. This, as a rule, occurs early, but not always by the same route. It may be intra-peritoneal, that is, into free peritoneal cavity, or extra peritoneal between the folds of the broad ligament. The latter, as a rule, occurs later in the pregnancy and does not have associated with it as much danger from hemorrhage as the peritoneal rupture. If the foetus should survive the primary rupture in the extraperitoneal variety, secondary rupture into the general peritoneal cavity may occur later and the ovum go on to the full time within the abdominal cavity. Probably the most frequent, and, I might say, the most favorable rupture by the intraperitoneal route is, first, a rupture into the lumen of the tube, then, by the force of the hemorrhage, the ovum is expelled through the ostium into the cavity; this form of rupture has been termed tubal abortion. The nearer the rupture the more fatal the hemorrhage; so noticeable has this been that it has been termed the "undertaker's end."

Treatment.

No argument will be advanced here to convince that surgery is the treatment whether the tube be ruptured or not. None of us are divided upon the indication. We do differ, however, in regard to the time a operation should be instituted and the technic to be followed in dealing with the existing conditions and pathology.

Reuben Patterson, speaking upon the management of ectopic pregnancy prior to rupture, seems to have voiced the sentiment of the majority of the profession. He says that whenever this condition is present an operation for the removal of the gestation sac is indicated in the first half of the pregnancy, since this is the period in which the mother is in great danger of rupture and sepsis, and the chances for

the survival of the fetus are very poor. In the latter half of the period he thinks that, inasmuch as the chances for rupture and fatal hemorrhage are much less and for the survival of the fetus much greater, an effort should be made to carry the patient, if favorable conditions and surroundings permit, to within two or three weeks of term before operating. It is the general impression that the ruptured tube must be brought to operation in great haste, but this necessity is the exception, rather than the rule. It will not be the object of this paper to decide the time of operation, but I will say that it has been and will continue to be my practice to operate upon all these cases at the earliest possible time, provided that, in my judgment, the operation itself would not kill the patient.

The technic of the operation itself does not give a great deal of concern, but the period of dealing with the tube involved and the opposite tube, as well as the ovaries, requires some consideration inasmuch that our management may decide the patient's future destiny. Personally, I believe that every ruptured tube should be removed. The danger of leaving it has been seen from the fact that a number of cases have been reported where the ectopic repeated itself in the same tube. The treatment of the opposite tube must depend upon its associated pathology and the condition of the patient. If apparently normal, it should be left. We know that repeated ectopic pregnancies frequently occur in the opposite tube, which, in itself, is a good argument for the sterilization of the patient. I believe that this sterilization should be done only rarely, and after a careful consideration of the individual case. The ovary on the affected side should be left when possible, if, in the judgment of the operator, the patient's condition and the existing pathology permit. After having dealt with the tubes and ovaries according to indications we next turn our attention to the removal of the blood clots in the cavity and pelvis. The method by which this is done, is a matter of individual choice, the only point of marked difference being as to the value of the use of saline to flush them out. The larger clots can be scooped out with the hand, and the free blood and smaller clots removed by dry or moist packs. It must be borne in mind that it is not necessary to remove every small clot, and that

more harm can be done than benefit derived by trying to remove them so thoroughly. Drainage is not necessary for those cases where considerable blood and clots are left. Those who advocate flushing with salt solution claim that it stimulates the patient, which, no doubt is true, but in my opinion, the solution can be used to a better advantage under the skin, beginning its use at the time the operation is begun.

In conclusion: (1) Primary rupture may be partial or even slight, or it may be complete or even fatal. (2) If incomplete, a subsequent rupture or subsequent ruptures are the rule. (3) With rupture free hemorrhage more or less severe occurs, which is never to be looked upon lightly, and which may prove fatal. (4) The loss of blood may be through one rapid fatal hemorrhage, or there may be a series of lesser hemorrhages. (5) Recovery may take place without operation. (6) Patients with ectopic pregnancy, even if in good condition, with or without ruptures, are almost certain to have future trouble, and should have an operation as soon as is consistent with good work.

DISCUSSION.

DR. E. M. SANDERS, Nashville: This is indeed a very interesting subject, and there can be no question but that Dr. Pollard has covered the ground completely.

I would like to say a word or two and impress, if I can, on some of you the importance of the history in the diagnosis. Of course, Dr. Pollard dealt with that fully, but we have found in our work that a leucocyte count, the temperature and pulse, and examination from below, examination of the abdomen, and all that you get outside of the history is very confusing, and I do believe a careful history is that most important factor in arriving at a diagnosis of this condition. The history should be taken several times, if possible.

In going over the symptoms I think of one case we have had of late which I would like to mention in this connection to bring out the fact that he did not mention, namely, uterine hemorrhage as a symptom of ectopic gestation. We have never seen this but once, but we did have one patient where the hemorrhage was not simply a bloody discharge, but a real uterine hemorrhage, the discharge of a large quantity of blood for weeks and weeks through the uterus, and at the operation it was quite easy to pass a probe from the sac through the tube on into the uterus.

I agree with Dr. Pollard about flushing out the abdomen. I do not think that should be done. However, we must remember that we are dealing

with infection which is sometimes subacute in some of these cases, and I think it may be best to drain some of them, and when it is done I think it should be done from below.

I will say a word or two about a class of cases he did not refer to that, I suppose, will fall under this subject, and they are the secondary cases, the infected cases, the neglected cases. A large percentage of the ectopic gestations I have seen come under this class. We have had two full term children within a year. In one, I am sure, we would have killed the woman had we gone in above, but following the example and advice of my teacher, Dr. Haggard, in handling these cases, we went in below and took out a full term child. There can be no question this child died close to nine months, was in the cul-de-sac, leaving an enormous cavity which looked as though the poor woman could not take care of it. The doctor is before me who brought the case in and the woman is well today.

Three months before that we had another full term baby which we took out from above. One should give serious consideration to this class of cases before he goes into the abdomen. Certainly, when we have a leucocyte count of 15,000 to 26,000, a rapid pulse, and septic chills, one is foolish to go in above and try to handle these cases.

I agree with what Dr. Pollard has said with reference to whether we should operate or wait. Any acute case should be operated on unless one feels the operation would kill the patient or has serious doubt about it.

I have nothing else else to add to this interesting paper, and I feel under many obligations to the author for presenting and hearing it, as he has brought before us a very interesting subject.

DR. POLLARD (closing): I have nothing further to add to what I said in the paper. I appreciate the remarks made by Dr. Sanders about these cases. I fully realize there is very little we can say about ectopic gestation and about the usual line of symptoms that come up in connection with the condition. I do not think we will ever be able to diagnose many of these cases of ectopic gestation before reupture. As time goes on we will see more and more of these cases, and I think will be able to diagnose a greater percentage of them soon after rupture and will not get them in that condition of sepsis which Dr. Sanders spoke.

DENTAL SEPSIS.

By Jack Witherspoon, M.D.,
Nashville.

Dental sepsis and its relation to certain constitutional diseases has been so frequently found in our work in the past year that we take the liberty of presenting this incomplete

report and ask that it be taken as a preliminary report because the majority of the patients are still under observation.

This is a report of alveolar abscesses and pyorrheas with accompanying X-ray films, laboratory and physical findings in twelve cases of local systemic disease, including joint rheumatism, muscular rheumatism, general adenitis, renal disease, antrum infection, heart irregularities and precordial pain, cervical abscesses and continuous fever of six months' duration, with a loss of twenty-five pounds in weight, diagnosed typhoid fever, latent tuberculosis and chronic malaria.

Our interest in this investigation was first stimulated about a year ago, and since that time that interest has grown into a faith that is firm and unshaken by an occasional failure.

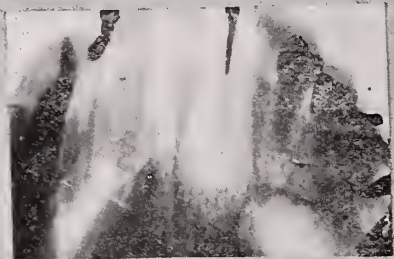
The films used are small ($1\frac{1}{4} \times 1\frac{3}{4}$ inches) wrapped in two waterproof papers. A larger size ($1\frac{3}{4} \times 2\frac{1}{2}$ inches) is practical in some cases in order to get the whole of one side at one exposure. The patient is prone upon a table with a movable head-rest. The assistant wears a lead rubber glove and places the film behind the teeth and high up to get the roots. Then the tube is tilted so as to get the rays at about right angle with the films and exposure is quickly made. This is repeated until every tooth is X-rayed. We do not try to pick out the suspected tooth. At first we did not do this, but let the patient see a dentist and have the tooth designated, but now we X-ray them and send to the dentist for assistance in removal of focal point and assist in its treatment or removal. Co-operation between the dentist and internist is essential in this line of work, and, if the dentist is absolutely alive to this situation, co-operation is easy to get.

Every pyorrhea alveolaris is not accompanied by alveolar abscess, nor is every alveolar abscess associated with marked pyorrhea. The pyorrhea may be caused by many organisms, straphylococcus, streptococcus, fusiform bacillus and amoeba, the last being the most common. In the abscesses the streptococcus is the most common offending organism, and, accepting the work of E. C. Rosenow as to its transmutation, change of form and virulence and its specificity, we are willing to lay the blame at its door for everything from gastric ulcer to goiter.

The organism causing the pyorrhea and that causing the abscess may be entirely different. One of our patients had a marked amoebic pyorrhea with foul, spongy, bleeding gums and abscess cavities at the root of two teeth from which he was getting streptococcus absorption with heart and joint involvement. Getting cultures of the causative organisms from the gums is a difficult procedure because of the large number and variety of germs always in the mouth. The technique endorsed is to wash the area with alcohol and dry it, pulling the tooth and culturing from the walls of the cavity, surface of the root and pulp after the tooth has been broken open with a vice or rongeur. The use of iodine has proved fortunate. When used to make the field aseptic it manages to invade the culture and we get no growth. Cultures are important at this time, as pointed out by Camac. For future use, in case the secondary foci do not clear up on drainage of the abscess, vaccine should be made and put away, but, until free drainage is established and some time has elapsed, vaccines are of no value in alveolar abscesses.

Gilmer and Moody describe their method of culture, which containing an anaerobic as well as an aerobic tube, catches the fusiform bacillus when present—an organism lost by other methods. Dr. Rosenow uses animal inoculation and demonstrates joint rheumatism, etc., in his technique of identification of causative bacteria. That all people have pyorrhea alveolaris sooner or later and that the specific cause is some form of amoeba is the recent statement of Bass and Johns. However, this condition was described by Barrett in July, 1914. In regard to this our observations are that while a majority have the amoeba as a cause, it is not always the factor in these cases.

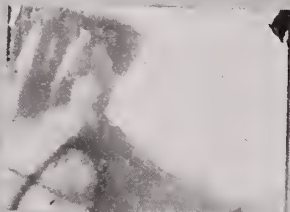
Riggs disease, with its foul suppurating gums, loose, sore teeth with associated dyspepsia, has been a subject for varied treatment from dentists and physicians alike. The abundant bacterial flora of the mouth has led to the use of various vaccines with only partial success. Not until the amoeba was declared the cause were any dependable results had in its treatment. Barrett, following the work of Vedder and Rogers, applied emetin locally.



Incomplete Root filling, Large Cystic space.



Apical abscess



One Root disengaged - Other Rooted



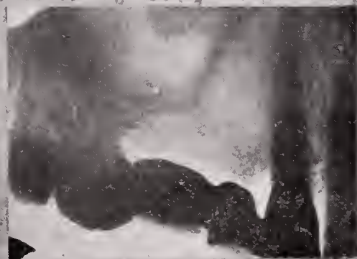
Root abscess



Beginning Path.



Remains of roots in situation.



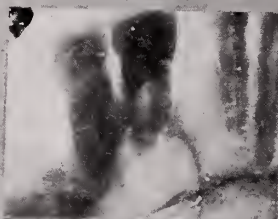
Pyorrhea Abscess in Maxilla



Exposed 3rd molar



Antrum disease



Antrum disease



Impacted 3rd molar



Perforated Root



Pyorrhea Pocket



Loose lower Incisor



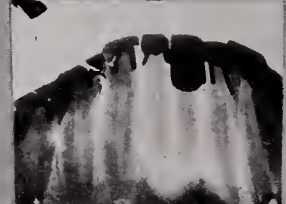
Rough Crown



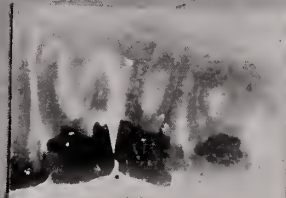
Very Large Abscess



All Roots affected



Case of too much Gold.



Abscesses and poor crown work.



Pyorrhea Pocket



Dead Roots

His results attracted so much attention that other workers, notably Bass and Johns, followed him, using emetin hypodermically and locally with cures in 99 per cent of cases. Any one familiar with amoeba hystolitica and amoeba coli will readily recognize the end-amoeba bacillus as the smaller and more sluggish animal. Anyone familiar with treatment of amoebic dysentery will readily fall in line with the hypodermic administration of emetin and free cleansing of the mouth with anything and expect results. The futility of application of emetin locally is apparent to anyone who closely examines these gums in conjunction with X-ray films of the teeth. We insist, however, on frequent cleansing of the mouth with water, saline or dilute mouth wash, and feel that this will prevent reinfection from debris just as enemata prevent reinfection in dysentery. We use a sterile ampule emetin in grain one-half and one-third, giving two a day for three days and one a day for three or four days, and examine the mouth for protozoa. Usually the first effect noticed is loss of the spongy, bleeding condition and improvement in the pus secretion. At this time any extraction found advisable is done and the cavity is cultured.

We have found no case that did not clear up of amoeba under the above treatment, but the improvement of the streptococcus infection is slow and prolonged, but none the less certain. Should the patient relapse new foci are searched for—such as the antrum, sinuses, stump of tonsils or soft glands, etc.

As to the etiology of the abscess cavity there has been some argument. Does the infection reach the alveolar process through a rotten pulp and nerve canal, or from a pyorrhea following the wall of the tooth through its root, or is this a hematogenous infection deposited here by the blood stream that affects and destroys the tooth from below? Experimental investigation has fixed responsibility on all of these routes. Certainly the abscesses are found in the neighborhood of filled teeth and in over-dentistried teeth, according to Dr. Billings.

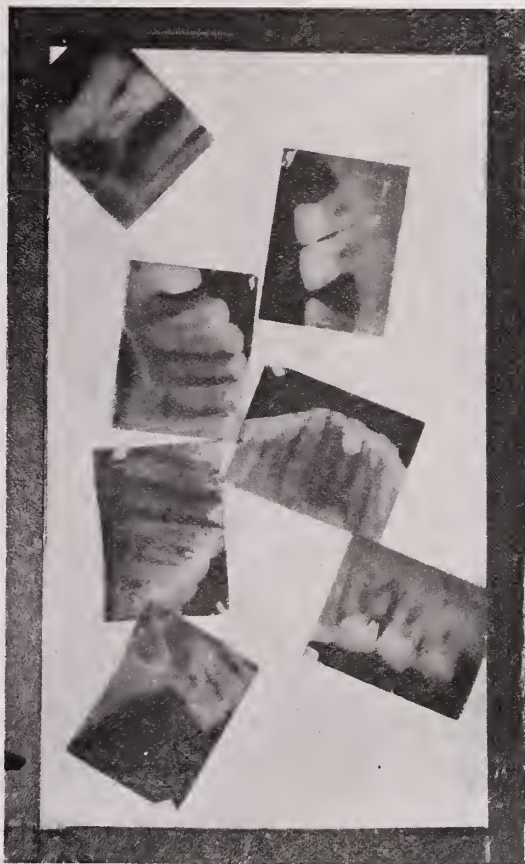
Abscess cavities may be seen above a sound tooth and careful examination of the plate will show a neighboring tooth to be the faulty one, therefore, gum boils or sinuses above a

tooth is no positive indication to the tooth that needs extraction and X-ray examination is essential lest we pull the wrong tooth.

Drainage of these pockets of infection is effective in three ways:

- (1) Through the tooth.
- (2) Through the sinus.
- (3) Through the tooth socket after extraction.

Treating the infection locally through an open nerve canal is done every day and it remains for the dentist to say if it is effective. We do not think so. Sinuses form above the tooth and this is often enlarged by the dentist



Complete set mounted between glass plates.
Find eight abscesses.

to effect drainage, but this is imperfect. If the abscess extends down around the tooth, often the dentist does a root amputation and claims effective results. While we hope that the dentist can accomplish this by conserving teeth we feel that nothing but extraction and complete drainage will get results, and we feel that when an abscess cavity is discovered about a tooth and the clinical symptoms jus-

tify us in believing this is a focus for systemic infection, that this tooth should be extracted and, if the pathology justifies, a currettement of the walls of the cavity should be done.

Conclusions.

First. Pyorrhea aveolaris is a most common cause of systemic diseases.

Second. Some form of amoeba is the cause of most pyorrhea.

Third. That emetin, a specific amoebicide, is a curative agent in this disease when caused by amoeba.

Fourth. That the infection at the roots of teeth may result in the formation of abscess cavities which harbor streptococci of varied virulence, and only extraction and drainage will cure.

Fifth. That the absorption of toxins from these foci often result in severe constitutional disease, endocarditis, myocarditis, arthritis, nephritis, neuralgia, muscular rheumatism and probably there is a direct connection between these foci and other lesions, viz., exophthalmic goiter, gastric ulcer.

Sixth. That the X-ray offers the best means of diagnosis and often dental examination will overlook the real lesion.

Seventh. That the extraction of teeth is justifiable to produce free drainage.

Case Reports.

No. 1. Mrs. S.

Symptoms: Pains in legs for months, with fever of intermittent type. Pains so severe in calves of legs that it interfered with locomotion. Had pyorrhoea with painful teeth. Much dentistry. X-ray showed great deal of bony necrosis under extensive bridge work. Advised removal of bridge, pulling teeth and drainage of pus cavity. Improvement was immediate. All pains ceased in a short while.

No. 2. E. H. C., aged 65.

Came to us May 26, 1914, with almost complete loss of vision. Persistent headache, a loss of twenty-five pounds weight in three months. Six weeks before he had had pink eye, which yielded to treatment promptly. On May the first, three weeks prior, had seen several physicians, who diagnosed hemorrhagic retinitis, albuminuric retinitis, parenchymatous nephritis.

Examination showed hemoglobin 60 per cent, whites 13,000, reds four million five hundred thousand, and blood pressure varying from 180 to 210. Urine was loaded with albumin and mixed variety of casts. Considerable blood. Phthalein tests intravenously showed 35-80 in two hours. His vision five two-hundredths each eye. Numerous hemorrhages throughout the retina and marked exudate in the macular region, presenting a picture of hopeless parenchymatous nephritis. X-ray of gums showed canine and first molar upper left side to have separations and pockets of pus at the tooth. This after negative reports from a dental examination by a competent man. Extraction of both of these teeth gave several drops of pus and some odor, but owing to mouth contamination pure culture could not be had.

Patient placed in bed in the hospital, dieted, but no further treatment, except that directed to his mouth. Improvement was immediate, and January 6, 1915, eight months afterward, his hemoglobin had gone 60 to 90 per cent, white cells 13,000 to 9,000. Urine showed trace of albumin, otherwise normal. Phthalein test 80-85 in two hours and gained in flesh forty pounds. Best of all, retina had completely cleared up and patient could read the finest print.

No. 3. Mr. T.

Optic atrophy, nephritis, marked amoebic pyorrhoea and abscesses above three teeth. Loss of half of teeth. Cause pyorrhoea. This patient died of stroke of hemiplegia inside of a week, but was under treatment with emetin and pyorrhoea had cleared up. The plates are interesting to show the marked destructive effect of the amoebic pyorrhoea.

No. 4. Dr. O., aged 29.

Complained of precordial pain and palpitating heart. Thought to be due to smoking, and quit with no relief. Wakes up at night with pain over heart. Much dentistry. Prolonged effort to cure Rigg's disease. X-ray showed pus cavity above two teeth and many ameba were found by microscope. Emetin instituted, two teeth extracted and immediate improvement of all symptoms, and at four months has had no further attacks of the heart pang.

No. 5. Mrs. S.

Continuous fever for several months. Cervical adenitis. Short attacks of rheumatism in

knees and wrists, and aching of limbs. All tubercular tests negative. Wasserman negative. Dentist reported mouth O. K. X-ray of the teeth showed a large abscess cavity above bicuspid which had new crown on it. This cavity is close to the antrum. Tooth was pulled and pus drained. Culture streptococcic. Antrum found to be in state of empyema and drained. Patient improving rapidly and gaining three pounds a week for the last two months.

No. 6. Mr. C.

Intermittent fever. General muscular aching, especially in back muscles and muscles of thigh. Pyorrhoea and cavities under two teeth of lower jaw. After teeth extracted and mouth put in cleanly condition all muscular and joint pains gone. Patient well.

No. 7. Dr. A.

Had antrum involved and came to see if tooth was the cause. A sinus was found above the second molar. X-ray showed large abscess in the cavity above this tooth. Tooth drawn and antrum drained. Patient recovered.

No. 8. Mrs. P.

Abscess of the neck from suppuration of cervical glands. History of gun boils. X-ray showed bad molar with necrosed alveolus below. Also above one which was pegged. Abscess cavity at the roots of the cervical gland. Three teeth were drawn. Patient recovered and gaining weight.

No. 9. Mr. M.

Continuous fever all last summer. Had loss of 25 pounds in weight. Had no cough. Marked suppurating by pyorrhoea and gums bleeding so freely that dentist was afraid to pull out teeth. All teeth were loose and half were lost. Amoeba found and after emetin for few days, bleeding ceased and teeth were extracted. Patient has gained weight, fever has ceased and he is back at work.

No. 10. Mr. B., shoemaker, 32 years old.

Had never had a day's illness. Developed edema of the larynx and was sent to Nashville. When he reached the Union Station he was unable to continue his journey because of inability to get his breath.

Examination of urine showed it loaded with albumin and casts. Examination of mouth revealed pyorrhoea of four roots, two of which had abscesses at their points. Mouth immediately treated. For three days breathing a

difficulty. Then became cyanotic. Then became unable to get but smallest amount of air through obstruction and immediately tracheotomy became imperative. The tracheotomy was followed by pneumonia, from which he recovered. He was able to get some air through the larynx by the third day, from which time improvement was rapid. The tube was removed at the end of the week. Tracheotomy opening closed rapidly. Phthalein test at this time showed 85 per cent in two hours.

PSORIASIS.*

By G. R. Jones, M.D.,
Orlinda, Tenn.

I have selected this disease as my subject, not because of having had any extensive experience with it, my own experience in the treatment of psoriasis having been somewhat limited, but because, to me, it is one of the most, if not the most, interesting of all dermatoses. I wish to state at the outset, therefore, that for what I shall have to say regarding this very interesting condition, no claim whatever is made for originality, my paper being merely a brief resume of some of the recent literature on the subject.

Psoriasis is defined as a chronic inflammatory disease of the skin, characterized by numerous dry, reddish, rounded and sharply defined patches of various sizes covered with abundant white or grayish-white imbricated scales. Although our text-books tell us that psoriasis is always a dry, scaly-papular eruption and that oozing, vesiculation and pustulation never occur, one writer has recently stated that "a psoriasis may, if over-stimulated, come to look like an eczema, i. e., it may present the phenomena of weeping and crust-formation, the character of the latter being essentially different from that of uncomplicated psoriasis."

Psoriasis as a disease has been known since the days of the early Greeks, who gave it the name of "lepra." Despite this fact and the fact that it makes up from two to five per cent of all dermatoses, the real nature of the disease is still practically unknown. Many theories

*Read before Robertson County Medical Society.

have been advanced as to its etiology, but so far none of them has been satisfactorily demonstrated to be true. The three most prevailing views with regard to the nature of psoriasis are: (1) that it is due to a parasite; (2) that it is a disease of neuropathic origin, and, (3) that it is a disease resulting from a disturbed metabolism.

In support of the first or parasitic theory, two investigators have recently found ultramicroscopic organisms in psoriatic lesions. These passed through a Berkefeld filter and resembled the Paschen corpuscles of variola. Inoculation by scarification produced typical lesions in three psoriatic patients after an incubation period of from 10 to 14 days, and auto-vaccination gave excellent results in three cases, according to these investigators. A fact which was formerly attributed to the influence of heredity—that the disease seems to “run in families”—might also seem to support the parasitic theory, but this might be accounted for by the disturbed metabolism theory also, as the same dietetic and hygienic conditions which would produce the disease in one member of a family, would also threaten other members of the same family, as is the case in pellagra, which is not now generally considered a parasitic disease.

Various investigators of more or less prominence have at times discovered different organisms in the lesions of this disease, but none of them has been generally supported nor accepted, and the fact remains that no specific organism has been isolated.

The second or neuropathic theory, while advocated by some men of prominence, has of late years lost ground. In its support are mentioned, among others, the following clinical observations: Relation or association with arthritic disease; its appearance at points of cutaneous irritation; its occasional though rare occurrence over peripheral nerve distribution, sometimes unilateral; the observation of outbreaks, in those predisposed, after emotional attacks, and the occasional association of sciatica and pricking sensations in the ends of the fingers and toes. There are none of these facts, however, which may not be accounted for by one or the other of the opposed theories mentioned, and, taken as a whole, this theory has comparatively little to commend it.

The most comprehensive research work of

late years in the study of psoriasis is that done recently by Schamberg, Ringer, Raiziss and Kolmer, of Philadelphia, through the generosity of a benefactor, and the results of their investigations strongly support the third or metabolic theory of this disease. They isolated from psoriasis scales twenty-two different microbes and studied them individually with entirely negative results. They also investigated the metabolism of about a dozen patients suffering from psoriasis, paying particular attention to the nitrogen balance. These patients were studied under the most rigid conditions for periods varying between 40 and 168 days. The food received by them was analyzed and weighed and the nitrogen in the urine and feces carefully determined. The scales were collected with as much care as possible and their nitrogen determined. In one case the perspiration was collected and analyzed. Thus the intake and the output of nitrogen were compared, and it was soon observed that these patients suffered from the retention of rather large quantities of nitrogen on diets on which normal persons would maintain an equilibrium. This retention was increased or diminished in proportion as the amount of protein food was augmented or reduced.

Clinically they noted that in the active stages of the disease a high-protein diet was followed by a spread of the eruption; conversely, a low-protein diet was followed by improvement, even when no local remedies were applied. Repeated analysis also demonstrated that the scales thrown off are composed almost entirely of pure protein, showing pretty well where the cells composing these scales obtain their “building material.”

Many dermatologists have tried dietary restriction in psoriasis, but have failed to obtain the good results claimed for this method. They did, however, find that the more severe the eruption the more readily was it influenced by appropriate diet.

The authors claim that they did not fail in a single instance to bring about marked improvement in the research patients by diet **alone**.

These same authors investigated the germicidal properties of chrysarobin, which is almost universally admitted to be the most powerful local remedy in the treatment of psoriasis. If this drug could be shown to be powerfully germ-

icidal, this fact would strongly support the parasitic theory of the disease. They therefore tested it extensively with various micro-organisms, but found that in the highest strength used it failed to even restrain bacterial growth. Their conclusion is, therefore, that chrysarobin possesses but feeble or no germicidal action. On the other hand, they found that it has a powerful affinity for certain elements of protein, and believe that this fact, coupled with the evidence produced some years ago by Unna and others to show that this drug produced its favorable influence in psoriasis by abstraction of oxygen, explains in large measure the excellent results obtained by the local application of chrysarobin.

The conclusion, then, as to the treatment of psoriasis, is that in order to obtain the best results, in addition to the time-honored and established use of chrysarobin externally, we should cut down to a minimum the amount of protein foods ingested by the patient.

I will state in conclusion that at the present time some strong claims are being made by Spiethoff, Fox and others for the treatment of psoriasis by the injection of autogenous serum, but they are agreed that this method is of little benefit unless associated with the external application of chrysarobin.

DUODENAL ULCER.*

By J. S. B. Woolford, M.D.,
Chattanooga, Tenn.

The time has long since passed when the patient or doctor is satisfied with the diagnosis of indigestion, dyspepsia or stomach trouble. Robert Morris once said to a graduating class that he wanted them to remember two things; one was, "not to go in debt," and the other was, "that stomach trouble was not stomach trouble." Appropos of this remark, Cabot recently quotes statistics of more than 15,000 cases of dyspepsia, lists approximately 1,300 of the 15,000 as being non-gastric, and states further that there is not an organ in the body that cannot produce gastric symptoms and that truly

gastric causes of indigestion can almost be reduced to two—cancer and ulcer.

At first we had the men that thought it was all due to chronic appendicitis and advised removal of the appendix for these cases. Some of them recovered and others left the hospital "doing nicely" only to have a return of the symptoms later that they had before that operation.

Then it was Jackson membrane that was at fault, later came Lane's kink, and now duodenal or gastric ulcer. I am sure that indigestion is not always from the same cause and I want to insist that we use every means to determine the exact cause in any given case before we advise surgical intervention. First, by a careful taking of history of the case—which is too often neglected—then repeated physical examinations, and last, but not least in importance, X-ray examinations. The location and symptoms of ulcer have changed much in the last few years. All ulcers occurring in or near the stomach were formerly classed as gastric ulcer, while today those at or near the pylorus are classed by many as duodenal ulcers.

We formerly thought that gastric ulcer was more common than duodenal, that it occurred more frequently in females than in males, that it was more frequent in those under thirty years of age, and that hemorrhage was a very frequent symptom. We now know, however, that these statements are not true, for according to most observers duodenal ulcer is almost three times as frequent as gastric, that it occurs more frequently between the ages of 40 and 50 than below 30, that males are more frequently affected than females, and that hemorrhage occurs in less than half of the cases.

In my opinion, we can have a condition of duodenal irritation in which the subjective symptoms are identical with those of true ulceration, but probably milder in degree, and which condition is produced by reflex irritation from the appendix or gall-bladder or lacerated cervix or pathological changes in the uterine adnexa. These cases may be permanently relieved by removing the pathological condition causing them.

In a typical case of duodenal ulcer the patient will give a history of indigestion extending over a number of years and this history is very important from a diagnostic standpoint. How-

*Read at meeting Tennessee State Medical Association, Nashville, April, 1915.

ever, on carefully questioning, you will find that there have been intervals of comparative freedom from gastric discomfort, but when an attack does manifest itself it usually presents very definite symptoms, the most common being pain or discomfort two to four hours after eating—the so-called hunger pain which may be relieved by eating or by alkalis. Pain, tenderness and rigidity to right of middle line above the umbilicus are commonly present. In suspected cases if there has been no previous hemorrhage an examination should be made for occult blood in faeces, especially if the patient shows evidence of anaemia, for we may have marked anaemia from the constant loss of small quantities of blood. Again we may have cases presenting themselves in which the symptoms are not so clear cut and definite, but who suffer from varying degrees of flatulence eructation, heartburn and gastric discomfort, and in whom the presence of anemia would suggest an examination of the stool for occult blood—which test if positive would be of great value in diagnosis.

In completing a diagnosis of duodenal ulcer gallstones must be considered. However, cases occur in which the symptoms of one simulate the symptoms of the other so closely that it is well nigh impossible to make a correct pre-operative diagnosis, as the following cases will illustrate.

A mechanic 40 years of age, referred by a very competent physician, with a diagnosis of gall-stones. He gave a history of repeated attacks of colic in right hypo-chondriac region requiring morphia for relief, nausea and vomiting during attacks, slight jaundice, and after attack was over was able to continue his work. On opening the abdomen the gall-bladder found normal, but a large indurated duodenal ulcer was found. Posterior gastroenterostomy was performed and patient made a good recovery, returning to work and remained well.

A few days later a woman 32 years old was referred to me with a diagnosis of pyloric obstruction from ulcer. This case had stomach stasis, with frequent vomiting, pain in epigastric region. On operation the stomach and duodenum found normal, gall-bladder distended and contained over two hundred stones, which were removed and gall-bladder drained. Pain and vomiting ceased at once and patient made good recovery.

It does not make much difference to the patient, if symptoms are severe enough for surgical interference, whether it is gallstones or duodenal ulcer, as it is very simple to correct either condition through the same incision, but the family are not satisfied with an incorrect diagnosis and it is humiliating to the surgeon.

The X-ray gives us great aid—I think much more than the stomach analysis from test meals. Of course, it does not actually show the ulcer, but from the study of a series of pictures we get much valuable information.

Treatment.—First in the cases with mild symptoms we must try medical treatment. I give strontium bromide one hour before meals in 10 or 15 grain doses and the well-known pill of silver nitrate $\frac{1}{4}$ grain with $\frac{1}{2}$ grain extract hyoscyamus. This treatment, coupled with a diet that is calculated to leave the least amount of residue and produce the least amount of irritation, will some times give relief and some cases apparently recover.

Inasmuch as these patients frequently suffer from constipation the question of overcoming this condition is an important one and it is my belief that the frequent and unnecessary administration of cathartic medicines and laxatives of various kinds is harmful and that it would be more rational therapeutics to advise the use of enemata or injection of a few drams of glycerine when necessary and by this means giving the duodenum as much peristaltic rest as possible, consequently allowing the ulcer a better opportunity to heal. If symptoms re-occur and an operation becomes necessary then you should open the abdomen through right rectus and make a posterior gastroenterostomy.

DISCUSSION.

DR. HERMAN R. BARNETT, Chattanooga: This is a most excellent paper and one that follows the lines of a great many of the leaders of our profession today, and on account of that it is of special interest.

The essayist speaks of the mistakes that are made in diagnosis, and also of those that have been made in the past few years. The appendix has been frequently blamed for these symptoms, later on, stasis, Jackson's membrane, and so on. It seems to me, we have not progressed far enough yet to be absolutely sure that the appendix is not really the cause of a great deal of duodenal and gastric ulcer. The frequent occurrence of these

conditions, in those cases of neglected appendicitis, and the fact that we most always observe a Lane kink, or some form of stasis in the intestine associated with these conditions, leads us to believe that they are the cause of ulcer.

Of the eleven cases I have had in the last two years, all of them gave a history of acute appendicitis that was neglected. I think a mistake is made in dealing with the cause and paying no attention to the effect. If we begin now to operate all of these cases of ulcer by means of posterior gastroenterostomy, we will be making a mistake again. I believe we should carefully study every case, and if there is a chronic appendix discharging pus in the colon it should be removed. It has been my practice to pull the colon up into the incision made in the upper abdomen, and remove the appendix.

Radiography has given us valuable points in diagnosis in these cases. There are no errors with a proper technic and proper reading or interpretation of plates. There is nothing that will show ulcer exactly, but a careful consideration of all points and a review of six or eight plates taken at intervals for twelve hours following a bismuth meal will reveal to us presence or absence of ulcer.

Kocher has said that this is one of the miracle operations. Patients, who for years have been troubled with indigestion and dyspeptic symptoms following operation are able to eat anything. They are immediately relieved, by a gastroenterostomy. They do not have to pay any further attention to the diet. As little as three days following gastroenterostomy these patients can eat anything, and those who have been in such a condition that even the sight of food was repugnant, now develop a great appetite and are enabled to enjoy life.

The time is now here when we are going to forget the old ways of diagnosing cases, stomach trouble or dyspepsia, and treating them for years, passing them on from one physician to another. Proper diagnosis and modern surgical treatment gives early relief.

DR. FRANK A. JONES, Memphis: Dr. Woolford's contribution is timely and assuredly to the point. Moynihan gave utterance to an expression in his book on duodenal and gastric ulcer which, in my opinion, has been fraught with considerable damage to the diagnostic world. He made the statement in italic letters that "Any chronic, recurrent, hyperchlorhydria is duodenal and gastric ulcer." While in the abstract that statement in a great many cases may prove correct, I have on repeated occasions seen it not verified at the operating table. The case proved to be not one of gastric or duodenal ulcer, but gall-stones with cholecystitis.

The physical diagnosticians in the past have had two hobbies with reference to certain phraseology. To make it euphonic, they denominated the region over the pulmonic valve as the region of romance of the chest, in that there are so many conditions that can simulate one or the other, and they

have called the region or the upper abdomen the region of romance in abdominal diagnosis. The region of the upper abdomen is not a region of romance, but a region of diagnostic fear and tragedy frequently. There is no romance about it. I have been watching these upper abdomen diseases for a number of years. As an internist I am ready to shake hands with the surgeon, and so far as my personal opinion is concerned, I have come to the conclusion that when a diagnosis has been made, after every method has been exhausted, when we have reached an accurate diagnosis that we are dealing with a duodenal or gastric ulcer, the time is ripe for surgical treatment. I know it has been said we can put our patients to bed with duodenal or gastric ulcer, and put them on the Lenhardt treatment and make a lime kiln out of their intestinal tract with bicarbonate of soda and a soap factory with the various secretions, and if you treat such a patient he is a veritable Gloomy Gus.

Did you ever see a victim of ulcer of the stomach who did not have all the elements of a psychasthenic or neurasthenic, so-called? And medical treatment in these cases, while it may improve the general condition of nutrition for a time, does not do permanent good, because at any time the trouble is likely to become rekindled, to become as volcanic as Mount Vesuvius. You leave there a residue, perhaps and abscess; you leave there irritation, so you cannot say when an ulcer is or is not cured. It might be cured or it might not be cured. When I have seen these miserable wretches, I have looked upon them as the most dejected, abandoned people in the world—these people with duodenal and gastric ulcers. When I have seen them on repeated occasions, after medical treatment has failed, and proper methods resorted surgically and successfully, they have been literally transformed into a good-natured or happy people. They take a different view of life. Their disposition has been transformed from a gloomy to a cheerful or sunny one. I consider this a triumph for surgery. There is no real medical treatment in the true sense of the word for appendicitis.

I find frequently cholecystitis associated with gastric and duodenal ulcers, or both existing at the same time. There may be what is known as the border-line of doubt between the surgeon and the internist, and if it is not a gastric or duodenal ulcer you can get out of a tight place by saying to the patient or to his friend, "Here we have an obscure trouble to deal with; we have reason to think it is this or that; it may not be either, but there is trouble in this particular abdomen, so that it becomes necessary for us to make a diagnostic incision and attend to whatever condition may be found. If it is not a gastric or duodenal ulcer, we may find the mischief is in the gall-bladder."

I want to call attention to a masterful article in a recent number of the American Journal of Medical Sciences by Dr. John B. Deaver on duodenal and gastric ulcer in relation to appendicitis. In

this article Deaver makes the bold statement that in the 'great majority of cases upon whom he operates for duodenal and gastric ulcer he removes the appendix, and he has found the appendix in a number of such instances badly involved.

DR. WOOLFORD (closing): I have little to say in closing the discussion except to remark that we should bear in mind these cases are not cases of emergency. We are not confronted by the same condition that we are when we have an acute appendicitis on which we must decide whether or not we are going to operate at once. But in these cases you have plenty of time, and I would insist that they should be thoroughly worked out and any associated pathologic condition other than duodenal ulcer must be attended to. If you do a gastroenterostomy and leave behind a bad appendix, or leave in a bad ovary, or if you leave a badly lacerated cervix with its ulceration, the patient may have nervous symptoms which will keep up, and you may have the patient continuing in that condition for a long time.

The cases of duodenal ulcer, in my opinion, that get well without operation are those that I am pleased to call duodenal irritation without actual ulceration, which do produce the same subjective symptoms without actual ulceration, and I think it is very wrong for these cases to be sent to a surgeon or be brought in by the consulting physician and expect an operation be done so that the patient may return to his or her home on the next train.

A HOSPITAL FOR TUBERCULOSIS PRISONERS.

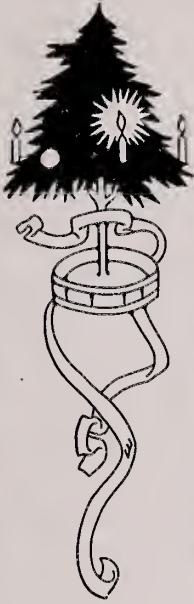
The Board of Control, in charge of Tennessee's prisons and charitable institutions has just completed a modern hospital for the tuberculous prisoners at the State Penitentiary. The new hospital is now occupied and thus has begun an humane work which promises much for the benefit of unfortunate prisoners and for the prevention of tuberculosis in this state.

For a long time Tennessee has condemned men to death by hanging when they were proven guilty of major crimes. She has also condemned men guilty of more minor offenses to death, more lingering, but none the less sure, from consumption, because the prisons in which these men have been confined were hot-beds of deadly infection. The law has given the state the right to hang men for cer-

tain capital offenses, but the state has never had nor can ever have the right to kill men by exposing them to deadly disease within the confining walls of any of her institutions. It has been an open secret that tuberculosis has been very prevalent in our prisons for years. The State Board of Health has insisted time and time again that a hospital for the treatment of tuberculosis and for the segregation of tuberculous convicts should be erected at the Main Prison. Former administrations have talked about it, governors' messages have referred to the matter, it has been discussed in legislatures and otherwise agitated, but nothing has been done until now. Constitutional obstacles have been found, lack of money was made a reason, and other excuses offered for not having something done for the treatment and prevention of tuberculosis among convicts. The poor helpless wards of a state continued to die in prison or were pardoned and sent home to help scatter consumption.

We are not informed as to how Governor Rye and Commissioners Denton, Baird and Murray managed to overcome constitutional difficulties, if any existed, nor as to how the legislature of 1915 found money to allow these gentlemen to build the hospital, but the hospital is there and is occupied by a number of prisoners in whose hearts new fires of hope have been kindled and who will be given the best chance possible for restoral to health. If the constitution has been overridden in building and equipping this hospital, we thank God for the men who had the nerve and the heart to override it. If Tennessee did not have enough money to build this hospital we are glad that the 1915 legislature put the state in debt for its building.

The Journal hopes to have a description of the Prison Hospital and an account of its management and plans for work in an early number.



May your friendships be un-
broken, your accumulations
of cheerful recollections and af-
fections many, and the coming
Christmas Season and New
Year bring you the best you have
ever known in health, happiness
and prosperity, is the wish of

THE EDITOR



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OF THE

TENNESSEE STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Tennessee

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EDITORIALS**WHOSE PAPER?**

Some one of our county secretaries has sent the Journal a paper on "Normal Labor." There is no name on the paper and no word by which we can determine its authorship. Will the gentleman who was kind enough to send this paper in render the additional kindness of writing the Journal and giving the name of the author of the paper? Thank you!

U. S. P. H. REPORT ON PELLAGRA.

Dr. Joseph Goldberger, one of the ablest of all the able men in the U. S. Public Health Service, has completed certain experiments and studies with which he has been engaged for some months and has drawn some definite conclusions as to the etiology and prevention of pellagra. For the benefit of those of the readers of the Journal who have not seen Dr. Goldberger's report of his work, his "conclusions" are here given as in Public Health Reports for October 22 and November 12, 1915. It is needless to say that Dr. Goldberger's investigations were conducted with scrupulous attention to scientific detail. If the amount of space at our disposal permitted we should be glad to give here the entire articles descriptive of his studies as they appeared in the Reports.

Two orphanages in Mississippi were institutions in which the first of Goldberger's two lately reported investigations were made. In one of these there were 79 cases of pellagra in 1914, which in the other there were 130 cases in 1914. At the same time, a similar study was made in the Georgia State Sanitarium. The following "summary and conclusions" is taken from Goldberger's article in Public Health Reports of October 22:

1. The diet at two orphanages, "M. J." and "B.

J." for several years endemic foci of pellagra, was modified in accordance with the directions of the writers in September, 1914. Hygienic and sanitary conditions have remained unchanged.

2. The modification in the diet consisted principally of a marked increase in the fresh animal and the leguminous protein foods.

3. Since the change in diet at orphanage "M. J." there has not been observed any recognizable evidence of a recurrence in any of the pellagrins of 1914, 67 of whom remained under observation until they had completed at least the anniversary date of their attacks. Nor have any new cases been observed among the nonpellagrin residents of 1914, 99 of whom have been under observation for not less than a year.

4. Since the change in diet at orphanage "B. J." there has been observed this year but a single individual with recognizable evidence of a recurrence among the pellagrins of 1914, 105 of whom remained under observation until they had completed at least the anniversary date of their attacks. Nor has any new case been observed among the nonpellagrin residents, 69 of whom have been under observation not less than a year.

5. At the Georgia State Sanitarium, an endemic focus of pellagra, a ward of pellagrins in the colored female service and one in the white female service was organized in October and December, 1914, respectively, for a test of diet in the prevention of pellagra.

6. The diet in these wards was modified on the same principle as that at the orphanage. The institution routine and the hygienic and sanitary conditions have remained unchanged.

7. Since the change of diet and up to October 1, 1915, there has not been observed this year any recognizable evidence of a recurrence in any of the pellagrins in these wards, 72 of whom (36 colored and 36 white females) have remained continuously under observation throughout this period or at least until the completion of the anniversary date of their 1914 attacks.

8. During the corresponding period of observation not less than 15 (47 per cent) of 32 control female pellagrins have presented recurrences.

9. The conclusion is drawn that pellagra may be prevented by an appropriate diet without any alteration in the environment, hygienic or sanitary.

The second of Goldberger's studies, reported in Public Health Reports November 12, was in a Mississippi prison camp, where 12 convicts volunteered to submit themselves to the experiment through which it was proposed to show that pellagra is due to a poorly balanced diet.

Goldberger's "Results" and "Conclusions" are here given:

Results.

Of the eleven volunteers not less than six developed symptoms, including a "typical" dermatitis, justifying a diagnosis of pellagra. The nervous and gastro-intestinal symptoms were mild but distinct. The dermatitis was first noted between September 12 and September 24, 1915, or not later than five months after the beginning of the restricted diet. It is of great interest to note that in all our cases the skin lesions were first recognized on the scrotum. Later there appeared lesions on the backs of the hands in two cases and the back of the neck in one case. The scrotal lesions conformed to the type described and figured by Merk¹. This experience would suggest that the scrotal lesion is a much more common early skin manifestation than has heretofore been believed. It would probably have escaped up but for the fact that it was our routine to examine these men, and the special control group, completely stripped.

No person in the "camp" not of the volunteer squad has presented evidence justifying even a suspicion of pellagra.

The diagnosis of the above cases was concurred in by Dr. E. H. Galloway, Secretary Mississippi State Board of Health, and Dr. Nolan Stewart, formerly Superintendent Mississippi State Hospital for Insane, at Jackson, Miss.

We are very greatly indebted to Dr. Marcus Haase, Professor of Dermatology, Medical College of the University of Tennessee, Memphis, Tenn., and to R. D. Martin F. Engman, Professor of Dermatology in the Washington University Medical School, St. Louis, Mo., for assistance in excluding the other known dermatoses.

Conclusion.

The conclusion is drawn that pellagra has been caused in at least six of eleven volunteers as the result of the restricted diet on which they subsisted.

IMPERFECT PREPAREDNESS.

The neutral nations of the earth are in a turmoil of excitement over the question of preparedness against invasion or for the protection of their commerce and the maintenance of their rights on the high seas. This is a burning question in our own land—our press is full of it, our President has made it the outstanding feature of his message to Congress, political party declarations are marked by the prominence given to its consideration, the program for our national legislature is arranged with a view of making its consideration paramount.

It appears probable that our Army will be

provided with more guns and more destructive guns, that our Navy will be furnished with all the death-dealing instruments which the European nations now at war have found effective in destroying commerce and in blotting out human life.

With all the talk of military preparedness, with all the program arranged for placing our Army and Navy on a basis of death-dealing proficiency, and with all the horror of the records of our military camps of 1901 fresh in mind, is it not strange that any measure looking to Army and Navy expansion and equipment would be considered in Congress which does not carry well defined provision for furnishing our fighting men with proper medical and surgical attendance? We are informed that the measure to be proposed this winter makes no provision for the extension of the Medical Service of our Army on a peace basis, nor even for expansion at the beginning of a possible war. We can but believe that this most lamentable defect in the proposed measure will be remedied when the attention of members of Congress shall have been duly called to it. The following resolutions, adopted by the Southern Medical Association, have been sent by President Ellett of the Tennessee State Medical Association to the various County Medical Societies in Tennessee and have already been endorsed by some of them. The members of Congress from Tennessee have been notified of this action and have been requested to give the matter of an increased Medical Service for an increased Army their most careful consideration.

Knowing as we do the high order of intelligence and the broadly humanitarian qualities which characterize Tennessee's representatives in our national law making body, we have no fear about where their votes will be found on this question.

Resolutions Passed by the Southern Medical Association and Endorsed by Several Tennessee Medical Societies.

Whereas, the President and the Honorable Secretary of War have announced in the public press that a scheme for the reorganization of the Army will be presented to Congress at its coming session, which will materially increase the military establishment, and

Whereas, we recall the indignant protests and

criticisms of the Nation at the failure to provide adequately for the sick and wounded at the beginning of the Civil war and the Spanish-American war, and

Whereas, it is known that this failure was due to the lack of a sufficient number of medical officers in the regular Army and a means for increasing the medical establishment at the outbreak of war, and

Whereas, in spite of the lessons of the Spanish-American war, which were fresh in mind, in the reorganization of the Army in 1901 the Medical Department was not properly increased and no provision was made for its expansion in time of emergency, and

Whereas, to correct the defects of the 1901 legislation was necessary, in which the medical profession of the United States was called on to assist;

Therefore, be it resolved by the Southern Medical Association, in session at Dallas, Texas, that the Secretary of War be petitioned to make adequate provision in the reorganization of the Army about to be presented to Congress for a sufficient number of medical officers for the regular establishment, which provision should aggregate a proportion of medical officers of, at least, seventy-five hundredths of one per cent of the enlisted strength of the Army, or such number as the Surgeon-General of the Army may deem necessary, and

Be it further resolved, that the Secretary be petitioned to make provision in this reorganization for the expansion of the Medical Department at the beginning of war, by calling into service in the Medical Reserve Corps physicians from civil life who have been instructed in their special duties as medical officers in our summer camps, and otherwise, as the War Department may see fit.

TO KNOXVILLE IN APRIL.

The next annual meeting of the Tennessee State Medical Association will be held in Knoxville in a little less than four months. Unless all signs fail there will be a fine attendance from the East Tennessee counties. If Middle and West Tennessee will send their full quota the Knoxville meeting will come close to a record-breaker. The time to begin getting ready to attend this meeting is right now, and the way to begin getting ready is to make up your mind that you will be on hand in April.

Knoxville is a fine city with good hotels and can be easily reached from any part of the state. The Southern and L. & N. reach Knoxville by trunk lines and branch lines and each of these roads has connections with

numerous other lines. You can get to Knoxville, you can stay there comfortably, and you can get away easily.

The Knoxville doctors are a wide-awake and progressive lot and there are none more genial and whole-souled in their welcome to visiting men. They are expecting you and your professional friends to be at the April meeting.

A good program will be prepared and delivered and there will be something to interest you all the time.

To Knoxville in April!

NOW FOR 1916!

Membership dues are payable on January first. Report forms have been sent to all County Secretaries and it is hoped that these will be returned properly filled early in January. Your Secretary is ready for **your** 1916 dues, and it will be a great help to him if you will remit promptly so that he can make one report for the whole year.

The total membership for 1915 is very slightly below that for 1914. There has never been a year when as many members were reported early in the year as in 1915. There is really no valid reason why all old members should not be entered on the membership roll early in the year.

Help your County Secretary by sending him your 1916 dues right now while you have the matter in mind. Don't forget to include the one dollar medical defense fee.

FOR ANOTHER'S TRANSGRESSION.

The following letter has been received by the Secretary:

_____, Tenn., Nov. 23, 1915.

Dr. Olin West, Secretary Tennessee State Medical Association.

Dear Sir:

The self-enclosed letter from the Secretary of the A. M. A. needs no explanation. I sent my dues to the Secretary of the _____ County Medical Society, in which I have held membership, as there is no organization in my county, in ample time for me to be reported at the last meeting of the Tennessee State Association. Two or three times since April I have had communications from you

stating that I was not reported in good standing in my county society. I made your communications known to the Secretary of the _____ County Society. Now comes the enclosed from the A. M. A. stating that I am not reported in my State Association and, therefore, am not entitled to be a fellow of the A. M. A.

Now, I have to pay dues through the county secretary—can't pay to the state—and I have done all I can. The county secretary said he would attend to the matter. Rather than be annoyed so much with three different societies, I think I had better drop out of all of them.

Of course, "accidents will happen," but if I was reported not in good standing by you it was not my fault, neither could I prevent it.

So for as I am concerned, I don't care either way. Still, I should like for this nagging correspondence to cease. I paid the dues in time to allow me membership in the State Association and fellowship in the A. M. A., but I can't make the reports.

Yours truly,

M.

Enclosed with the above letter was one to Dr. M. from the A. M. A. notifying him that he could not be a fellow in the A. M. A. until he became a member in good standing in his state organization.

So here we have a good man and a good doctor—one any state society would be glad to have and one who has affiliated for years—driven to the point where he doesn't "care either way." He is deprived of privileges and rights which he has paid for and our Association is deprived of his service and fellowship. To all intents and purposes he is "beyond the pale," when, as a matter of fact, he has complied with every requirement. The secretary of the State Association is censured, everybody concerned is shown in a false light—all because a county secretary has failed to remit the doctor's dues and report his name.

And there are others, too, in this same county society and in a few other societies who paid their dues long ago, but have never been reported to this office. If we knew how to do it, we would have them reported. But it seems we don't know how, for various and

sundry attempts have been made without avail.

Most of the county secretaries—God bless them!—have been prompt and careful, but a very few have not. Their indifference and carelessness has hurt the cause. That's the plain truth.

DR. J. T. JONES.

Dr. James Taylor Jones died at his home in Jackson on November 5, 1915. Dr. Jones received his medical training at Johns Hopkins and for more than forty years was engaged in practice in Jackson. He was 69 years of age at the time of his death.

Dr. Jones was the organizer of the Board of Health in his home city and had served as its President for a number of years. He had also rendered valuable service in other official positions and was always identified with what was best in the life of his community. He was a Confederate veteran, a Mason, an active church worker, an honored physician, and a valued member of his county and state medical organizations.

DR. G. M. BURDETTE.

Dr. G. M. Burdette, an honored member of the Loudon County Medical Society and the Tennessee State Medical Association, died at his home at Lenoir City on November 5, aged 78 years.

Dr. Burdette was a soldier in the Confederate army, having served with distinction and surrendered with Lee. He was a Mason. For fifty years his home was at Lenoir City and he found great joy in ministering to the sick whenever and wherever called. He was surrounded with friends who loved him and tenderly revere his memory.

DR. J. J. MANARD.

Dr. J. J. Manard, a member of the Hamblen County Medical Society and the Tennessee State Medical Association, died in November from pneumonia. Dr. Manard was 56 years old, an alumnus of the University of Tennessee School of Medicine, having received his degree in 1895, and a physician who enjoyed the confidence and regard of his fellow practitioners and of the people among whom his life was spent and in whose service he labored.

News Notes and Comment

Pay 1916 dues promptly!

A mongrel "twilight sleep" often puts new babies to sleep forever.

Dr. Oliver Hill, Knoxville, visited the New York hospitals in November.

There are 1,434 names on our roll for 1915. We still insist that there should be 2,000.

Dr. D. E. Shields, Morristown, is recovering from a severe illness of several weeks' duration.

Dr. A. G. Kern, Knoxville, has returned from a visit to Cincinnati, Cleveland and Chicago clinics.

Dr. L. L. Shedd, Knoxville, has recently visited Cincinnati, Chicago, Cleveland and Rochester clinics.

There are men so eager for notoriety that they will refuse to help the helpless and then advertise their meanness.

Two deaths from intravenous injection of salvarsan were reported at a recent meeting of one of our county societies.

Dr. A. W. Ogle, Knoxville, is at work in Chicago clinics after a special course at the Chicago Post-Graduate Medical School.

Dr. Frank Reagor, Shelbyville, spent two weeks as a patient at St. Thomas Hospital in Nashville in November. He has returned to his work.

A new fifty bed hospital is being completed at Morristown. The Morristown doctors are very proud of their new institution, which is thoroughly up-to-date.

The surgeon who let the deformed baby die may be easy in mind, but we should hate to have to make the final settlement that is coming to him.

Society Proceedings

FAYETTE COUNTY.

Dr. John Morris, Secretary of the Fayette County Medical Society, reports to the Journal that a meeting has been held every month since this Society was re-organized, two years ago. One member, Dr. J. H. Cocke, of Moscow, has died, one has temporarily withdrawn, one resigned for cause, and two new members have been added this year. On November 2 the Society met at a banquet, twenty-four being present. Dr. J. S. Rawlins, of Haywood County, was the honor guest and presented a most enjoyable address.

Dr. J. A. Albright, for so many years Secretary of the State Board of Health, is President of the Fayette County Society. Dr. Morris is one of the secretaries of county societies who always has his records complete and his reports in on the minute.

HAMBLÉN COUNTY.

A letter to the Journal from Dr. C. T. Carroll, Jr., Secretary of the Hamblen County Medical Society, reports that regular meetings are held and that a fine spirit prevails among the members. Morristown, the capitol of Hamblen, is growing into quite a medical center, having nearly completed a sixteen thousand dollar hospital building.

SUMNER COUNTY.

The Sumner County Medical Society met in regular bi-monthly session at Gallatin, Wednesday, November 3, 1915, at 10 a. m. The following members and visitors were present: Drs. R. M. Buchanan, President; Lackey, Woodson, Reese, Allen, Wright, Roark, Hagen, Peden, Parker, Dunklin, Walker.

The Society felt highly honored by having as guests on this occasion Dr. B. G. Tucker, Health Officer of Davidson County; Dr. Olin West, Secretary of the Tennessee State Medical Association, and Dr. T. B. Yancey, Jr., in charge of the rural sanitation work of the State Board of Health in this county.

Dr. Tucker gave a very interesting paper on "Pellagra," which was discussed by Drs. West and Yancey. Both paper and discus-

sion were enjoyed by all present and a vote of thanks was tendered the gentlemen.

Adjournment was taken, to meet the first Wednesday in January.

JNO. R. PARKER,
Secretary.

MIDDLE TENNESSEE MEDICAL ASSOCIATION.

The semi-annual meeting of the Middle Tennessee Medical Association was held at Sparta on November 18-19. About forty physicians were present, the attendance having been reduced considerably because of the comparative inaccessibility of Sparta.

Some splendid papers were read and the scientific program was thoroughly enjoyed by the attending doctors. A public meeting was held on the evening of the first day, at which time an interested company of the good people of Sparta listened to an address prepared for them by Dr. F. B. Reagor, the retiring President of the Association.

Officers for the ensuing six months were chosen as follows: Dr. R. W. Billington, Nashville, President; Dr. W. Scott Farmer, Cookeville, Vice-President; Dr. Jack Witherspoon, Nashville, Secretary. The next meeting will be at Lewisburg in the Spring of 1916.

SULLIVAN COUNTY.

The Sullivan, Carter and Johnson County Medical Society held its regular monthly meeting at Hotel Bristol, Wednesday evening, December 1. There were present at this meeting Drs. Cottrell, Scott, Peavler, Staley, Rogers, Booher, Kernan, Stout, Campbell, Bachman, Reeve, Shoun and Vance.

The President being unavoidably absent, Vice-President Stout, of Johnson County, presided.

This being the time for the annual election of officers the following were elected for the year 1916: Dr. J. B. Shoun, Hampton, Tenn., President; Dr. G. E. Campbell, Elizabethton, Tenn., Vice-President for Carter County; Dr. J. B. D. Robinson, Mountain City, Tenn., Vice-President for Johnson County, and Dr. N. H. Reeve, of Bristol, Vice-President for Sullivan County. Dr. W. K. Vance, Bristol, Tenn., was elected Secretary.

A unanimous vote of thanks was extended retiring President, Dr. C. W. Fleenor, for his efficient service, for the reason that during his eighteen months of tenure of office he has been present at every meeting except three, notwithstanding he lives at quite a distance from the places of meeting, and encumbered with the exacting duties of a large practice.

The event of the evening, however, was a most interesting paper by Dr. N. H. Reeve, his subject being, "The Progress of Medical Science." This paper was one of unusual interest; in fact, was an intellectual feast for those fortunate enough to hear it, and was discussed at some length by the physicians present.

The Society received a most cordial invitation to attend and participate in the approaching meeting of the Southwest Virginia Medical Society, which holds its semi-annual meeting at Hotel Bristol, December 15 and 16.

SMITH COUNTY.

Dr. Olin West, Secretary, Nashville, Tenn.

Dear Doctor: Following is a summary of the Smith County Medical Society's work for the year 1915. You will note that we had four papers read by members of the Academy of Medicine of Nashville, for which the members of the Smith County Society were very thankful.

January—(1) "Injuries to the Scalp," by Dr. C. H. Donoho; (2) "Theories of Acidosis in Children," by Dr. H. C. Curtis.

February—On account of the inclemency of the weather and high water we had no meeting in this month.

March—(1) "Infection of the Extremities," by Dr. R. E. Key; (2) "Empyema of the Pleura," by Dr. B. J. High.

April—(1) "Lobar Pneumonia," by Dr. J. J. Beasley.

May—(1) "Significance of Pain in the Ear," by Dr. F. M. Blankenship; (2) "Dysentery in Children," by Dr. H. C. Curtis.

June—(1) "Abdominal Injuries and Treatment," by Dr. I. H. Beasley; (2) "Common Rectal Troubles in Children," by Dr. R. E. Key.

July—(1) "Goiter," by Dr. J. J. Beasley;

(2) "Diphtheria and Treatment," by Dr. Rhea E. Garrett.

August—(1) "Diagnosis and Treatment of Tuberculosis," by Dr. L. D. Cotten.

September—(1) "Pernicious Malaria," by Dr. R. E. Key; (2) "Tennessee's Relationship to Other States (Vital Statistics)," by Dr. H. H. Shoulders; (3) "The Margin of Danger," by Dr. W. A. Bryan.

October was devoted to the discussion of case reports. Dr. Key reported a case of double pyosalpingitis, which was operated on and recovered. Dr. Blankenship reported a case of puerperal eclampsia, resulting in death. Dr. Robbins reported a case of difficult delivery in a primipara 38 years old, resulting in death of child.

November—(1) "Diagnosis of Orthopedic Conditions and Treatment," by Dr. R. W. Billington; (2) "The Use and Abuse of Arsenic in Dermatology," by Dr. J. H. King.

December—(1) "Some Major Points in Minor Surgery," by Dr. I. H. Beasley; (2) "Poliomyelitis in Children," by Dr. Dr. H. C. Curtis.

Yours truly,

B. J. HIGH, Secretary.

THE SOUTHERN MEDICAL ASSOCIATION.

The Dallas meeting of the Southern Medical Association was the best in the history of this medical society. More than 1,200 doctors were on hand, the scientific program was most excellent, the discussions were lively and well directed, the social features were delightful.

There is no doubt about the future of the Southern Medical Association. It is a permanent organization which is bound to exert a powerful influence in things medical, not only in the South, but also in America. The Dallas meeting, far from the center of the territory from which the membership is drawn, has proven that Southern doctors mean to have an organization through which can be shown that Southern medicine is entitled to "a place in the sun."

Dr. Robert Wilson, Charleston, is the new President, Drs. Holman Taylor, Fort Worth, and Guy L. Hunner, Baltimore, are Vice-Presi-

dents, and Dr. Seale Harris, Birmingham, will, of course, continue to serve as Secretary-Treasurer. Atlanta will entertain the 1916 meeting.

Correspondence

Journal of the Tennessee State Medical Association:

I am having to deal with a peculiar type of fever which I would like to report.

They are taken at first with rigor lasting thirty to sixty minutes, attended with thirst, but no nausea. There is general aching and malaise. The pain through the temples and frontal region of the head is quite severe. The bowels are usually slightly costive, the tongue lightly coated. The rigor is attended and followed by high fever, the temperature often reaching 105, which remits, but does not disappear entirely. The temperature may drop to 101, but other symptoms continue the same during the next twenty-four hours. Then the rigor returns and the fever reaches its highest point. There is from the outset acute tenderness all over the abdomen, and especially over the small intestines, yet there is very little tympany. At this time the tongue may be a little red at tip. The mouth and tongue are sometimes dry and sometimes moist. One feature that is always prominent is prostration, and especially is this true with the aged. The heart action is always rapid and the respiration from 24 to 30. Some patients have appetite throughout the attack, but as a general thing there is an aversion to food. The skin is usually hot and dry, the urine scant and high colored. There is usually a dry and hacking cough.

My first prescription has been calomel, grs. iv, salol grs. vj m. et ft. chart no ii. Take one and repeat in two hours and follow with oil in six to eight hours. Quinine xxx salol and phenacetin aa gr. xx ceodeia gr. i ft. cap, No. x Sig. Take one every two hours until five have been taken, then wait twelve hours and repeat as with the first five. This generally relieves the chilliness and stops the chills, but the fever continues. The temperature during the remission will fall to 100 to

101, and the patient feel fairly comfortable, but during the exacerbation the temperature will reach 103 or perhaps 104 and is attended with considerable aching. The discharges from the calomel are always offensive; and to prevent autoinfection I repeat the calomel every 48 hours until the bowels are thoroughly emptied.

Following the last round of quinine I begin with salol, grs. 5, every four hours through the day, alternated with iodide calcium, grs j, giving four doses of each a day, but give my patient rest from 8 p. m. until 6 a. m. After the first two or three days I insist upon all the liquid nourishment they can take, especially the aged, as it is in these cases that the prostration is greatest. I have an old man now in the third week of this fever. While his fever rangers from 101 in the morning to 104 in the evening and there is bowel tenderness, prostration and some delirium during the exacerbation, yet there is no tympany. The tongue is moist and his bowels are inclined to costiveness. The rigors and chilliness were prominent at first. I frankly admit I do not know whether this is influenza, catarrhal fever or typhoid fever. One thing—the fever is the result of a low grade of infection. This patient is 70 years old and is just about as apt to die as get well. So far I have one hundred per cent of recoveries.

This letter is already too long, but will some one tell me what it is I am treating. The bad cases give me quite a spell of uneasiness every time. Awaiting replies, I am

Fraternally,

D. A. WALKER, M.D.

Friendship, Tenn.

Book Reviews

THE MEDICAL CLINICS OF CHICAGO. Volume I, Number 3. Bimonthly. W. B. Saunders Company, Philadelphia. Per year, \$8.00.

This number of the Chicago Clinics is made up of selections which are varied enough to interest any reader somewhere. In Dr. Chas. S. Williamson's clinic on the treatment of typhoid fever is presented a statement of the case from a conservative and commonsense viewpoint. He believes in feeding, but condemns over feeding. Lead poison-

ing and gout are the subjects of other clinics by Williamson.

Drs. Tice, Hamill, Abt, Preble, Hamburger, Mix and Tivnen are the other eminent gentlemen whose clinics make up the subject matter of this number. The subjects are well chosen and discussed in the usual helpful manner which characterizes the work of these teachers of medicine.

PRINCIPLES AND PRACTICE OF OBSTETRICS.

By Jos. B. De Lee, M.D., Professor of Obstetrics at the Northwestern University Medical School. Second edition, thoroughly revised. 938 illustrations. W. B. Saunders Company, Philadelphia, 1915. Cloth, \$8.00 net.

In the humble opinion of your reviewer, De Lee's obstetrics is the best work to be had on this subject. That our opinion is more or less generally held to is evident from the fact that this new edition is necessary within so short a time after the original volume made its appearance.

De Lee is, first of all, a teacher. His text-book is the book of a teacher who knows what should be taught and how. There are some good things which have been left out for the very simple reason that something better is offered. The fads and frills are omitted just because they are fads and frills. The Freibengh "twilight sleep" finds small favor with this author for the very sensible reason that he has seen it tried at its home, has tried it himself and knows it won't do.

The student will find this book a source of safe information and the practicing physician will find its teachings safe guides to follow in his obstetrical work.

THE PRINCIPLES OF BACTERIOLOGY; A PRACTICAL MANUEL FOR STUDENTS AND PRACTITIONERS. By A. C. Abbott, M.D., Professor of Hygiene and Bacteriology, and Director of the Laboratory of Hygiene, University of Pennsylvania. Ninth Edition, Thoroughly Revised, with 113 Illustrations. Lea & Febiger, Philadelphia, 1915.

Abbott's Bacteriology has long been a recognized text for students and has enjoyed a well merited popularity. The main object of the previous editions has been even more forcibly stressed in the present edition. It is a text for students.

The author, by virtue of many years' experience, both in didactic and laboratory teaching, has been enabled to eliminate much useless and discarded matter that is so frequently found crowding the pages of text-books.

The book is divided into two general parts, the first dealing with the general principals of bacteriology. The chapters on Sterilization, Preparation of Culture Media, Systematic Study of an Organism, Inoculation of Animals, Infection and Immunity and Hemolysis are presented in an

exceptionally clear manner. The second part considers the application of the methods of testing the means of sterilization for different substances are outlined in comprehensive experiments. A systematic study of the various bacteria includes directions for obtaining material for work in the laboratory under each caption. A chapter on the study of water, milk, soil and air concludes the book.

DISEASES OF THE NOSE AND THROAT. By A. Coolidge, M.D., Professor of Laryngology in the Harvard Medical School, Philadelphia and London. W. B. Saunders Company, 1915.

One is impressed by the amount of valuable information the author has condensed into the 360 pages of this little manual. Cuts of instruments are conspicuous for their absence, and unproved statements and superfluous treatment are to a large extent avoided, while established facts and well authenticated theories, together with etiology and pathology, are taken up more fully. The author has the faculty of expressing himself in few words and those who wish to consult a manual will not be disappointed in this one written by Dr. Coolidge.

THE CLINICS OF JOHN B. MURPHY, M.D., AT MERCY HOSPITAL, CHICAGO. October, 1915. W. B. Saunders Company, Philadelphia. \$8.00 per year.

Bone and joint surgery is given major consideration in this number of this very popular bi-monthly publication, though a variety of subjects of present surgical interest is included. It is really very wonderful how much information can be had from Dr. Murphy's "clinical talks" and from the "notes" which are added by him in preparing his "cases" for publication. A summary is given at the head of each clinical talk in which is given an outline of the manner in which each particular subject is handled. Complete case histories are given. Dr. Murphy's comments in the course of operation are full and most instructive, the findings in each case are fully set forth, post-operative results are noted, and post-operative comment made, operations are fully described, and in many instances "points to be emphasized" are brought out with especial care. This whole number of the Clinics is full of practical information.

MODERN BIOLOGIC THERAPEUSIS. From the Medical Department of the Lederle Antitoxin Laboratories, New York.

This, a beautifully appointed little volume of some 300 pages, is issued by one of the standard producers of biologic products—Lederle. Only the products of the Lederle Laboratories are discussed, no effort having been made to consider all the various antitoxins, vaccines, sera, etc., which are turned out in such bewildering confusion from so many producers. While, of course, a "good case is made out" for biologic products in general and for Lederle's in particular, there is a wholesome tendency throughout to treat the reader fairly and to give due notice of adverse holdings. Part I is devoted to a well written and exceedingly instructive account of the "Historic Development of Immunology." This is one of the very best productions of all that have come from the various makers of biologic products.

"SIMPLIFIED INFANT FEEDING." By Roger B. Dennett, B.S., M.D., Adjunct Professor of Diseases of Children N. Y. Postgraduate Medical School. Cloth, pp. 355. Price, \$3.00. J. B. Lippincott Company, Philadelphia.

This book lives up to its title. The author deserves the gratitude of physicians not specialists in pediatrics for presenting the subject in such an uncomplicated manner that any mother or nurse can be relied upon to follow directions.

The burden of the book is the restricted use of sugars—quite in contrast with other works on this important subject, in which sugars are more or less neglected, and while it probably is given too much prominence it serves to call attention to this factor which is very frequently the determining point in feeding.

The attempt to classify diarrhoeal diseases is dangerous. While the author may be able to discriminate in the very beginning between cases which can stand milk feeding and those which demand starvation or milder diet, it seems a bad precedent which will lead others of more limited experience into serious error.

The general make-up of the book is neat and attractive. The extended synopsis (21 pages) is an excellent feature, making it possible to refresh the subject in a few minutes.

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A COMPARATIVE STUDY OF THE DIAGNOSTIC TESTS FOR SYPHILIS.

(Continued)

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Memphis.

The four reactions have some differential value, the Lange test especially so. Bearing upon this point, a paper upon the examination of spinal fluid by Miller⁶², which appeared when this manuscript was nearly completed, makes this whole chapter of my paper practically superfluous. For the purpose of making this study more complete, however, his table II, bearing upon the differential value of the four reactions in the diagnosis of different leucic conditions of the central nervous system, is here reproduced:

TABLE II. From Miller.
Showing the Average Frequency of the Various Reactions in Syphilis of the Central Nervous System.

	Paresis %	Tabes Dorsalis %	Cerebro- spinal Syphilis %
Blood Wassermann.....	98-100	70	70-80
Spinal Fluid Wassermann..	97	60-89	85-90
Pleocytosis.....	98	85-90	85-90
Positive Globulin Test	100	90-95	90-95
Colloidal Gold Test	98-100	85-60	85-80
	Paretic Curves	Luetic type of Curve	Luetic Curve

In Miller's paper the relative value of the different globulin reactions was discussed. We can agree with him that the butyric acid test

of Noguchi has been satisfactorily supplanted. We had overlooked Pandy's test.

In the few cases in which we have tried it since then we have found it so simple and the reactions so unequivocal that we are almost afraid to believe in its specificity. As given, the technique was inadvertently misprinted. I here take the liberty of reproducing the entire paragraph with the technique corrected, hoping, however, that no one interested in the subject will neglect to study Dr. Miller's very valuable contribution.

"Pandy's test has not received the attention its deserves. None of the other reactions used to reveal an excess of globulin is so simple in execution or so quickly decisive in its results. The reagent consists of a saturated aqueous solution of carbolic acid; ten parts of pure crystals are added to 100 parts of hot distilled water; the mixture is kept at room temperature for three to four days, during which time it should be frequently shaken. At the end of this time the clear supernatant fluid is drawn off into another bottle. To approximately 1 cc of the reagent is added one drop of spinal fluid. Normally no change occurs or at the most an extremely faint opalescence; with a fluid abnormal in its protein content there develops instantly at the point of contact a bluish-white cloud, often resembling a ring of smoke, which gradually settles to the bottom of the tube."

The exact scope of the globulin tests is best summed up by Nonne (ibid p. 346.) "The Phase I reaction may occur in all organic affection of the central nervous system. Like lymphocytosis it is also observed almost with-

out exception (95 per cent, and some authors state even 100 per cent,) in syphilogenetic diseases, both syphilitic and meta-syphilitic. But, whereas lymphocytosis occurs, in addition in persons who were once infected with syphilis, but do not suffer from organic nervous disease, a Phase I reaction occurs exclusively in patients with organic nervous disease; it is never observed in persons who have once been infected by syphilis and suffer now only from a functional neurosis (general nervousness, neurasthenia, hypochondriasis, etc). This important fact enables us to decide the diagnosis in cases which frequently occur in practice, and in which we have to face the question whether it is an early state of general paralysis in a luetic individual, or neurasthenia, or simple nervousness, or submaniacal phases of a circular psychosis in persons who have previously had syphilis. In all such cases the 'Phase I' reaction will not be positive so long as it is not a case of general paralysis. On the other hand, the 'Phase I' reaction is unable to assist the differential diagnosis between a non-syphilitic organic cerebral or spinal affection and a syphilitic nervous disease; for instance, it cannot help us towards a decision between multiple sclerosis and cerebrospinal syphilis.

"The 'Phase I' reaction in organic non-specific affections is usually slight, often very slight in character, and sometimes is entirely absent, while in all syphilogenetic organic diseases it is almost always strong, and often very strong."

Nonne's four reactions do not include Lange's test. They comprise the serum WR, the spinal WR, the lymphocytosis and the "Phase I." There can be no doubt that the colloid gold test has great value as an aid in establishing the diagnosis of tubercular meningitis, general paralysis and spinal lues, the latter being the curve of general syphilis, but more or less variable. The "tabetic curve" is often very characteristic.

The Luetin Reaction.

The luetin test for syphilis was described by Noguchi in 1911. Luetin is the name given to a sterile emulsion of a killed culture of *spirochete pallida*, grown from six to sixty

days, anaerobically, mixed with equal parts of salt solution. Noguchi's original medium was ascitic fluid agar. Baeslack⁵² finds horse serum, heated to just short of complete coagulation a good medium. Luetin, .07cc, is injected with a tuberculin syringe into the skin, very superficially, so as to form a small wheal. In a negative reaction there may be some reddening, but not beyond the original wheal, and this disappears in from three to five days. In positive reactions there is at first always a raised papule, with surrounding induration and redness. "By general consent, three positive types of reaction are recognized, a papular, a pustular, and a torpid. The first is an indurated papule with a surrounding hyperemic zone, which appears twenty-four hours after injection, increases in size up to the fourth or fifth day, and then subsides. The second type is a more intense reaction, and is characterized by a pustule instead of a papule at the point of injection. The so-called torpid type of reaction occurs from four to twenty-eight days after the intradermal injection, and usually takes the pustular form. It is observed most frequently in congenital and parasyphilitic cases. Wolfsohn obtained a torpid reaction in six of twelve patients with cardiovascular lesions. The delay in the appearance of this type of reaction is, of course, a disadvantage.

"In general paresis, 75 per cent of the tests made by Ross gave positive results. In 121 cases recorded by Kilgore, Wolfsohn, Benedek and Boardman, 78.5 per cent gave a positive reaction. These results are not so largely positive as those with the Wassermann reaction in paresis, the latter test, according to Robertson, being positive in the blood in 99 per cent of cases, and in the spinal fluid in 94 per cent. In spite of this, there are points in favor of the luetin reaction. It is sometimes strongly positive when the Wassermann reaction is repeatedly negative. Again, it is specific. The luetin test may be quickly performed by the clinician, whereas the Wassermann requires a skilled technician and special equipment, and under the best of conditions, errors creep in."⁵⁵

Kafka²⁶ reports examination of 139 cases,

with results as follows: Latent syphilis, negative 38 per cent, positive 62 per cent; congenital syphilis, negative 28 per cent, positive 72 per cent; paralysis, negative 48 per cent, positive 52 per cent; lues cerebri, negative, 10 per cent, positive 90 per cent; tabes, negative 0 per cent, positive 100 per cent.

The luetin reaction is comparable to the tuberculin reaction; it not only shows that the individual is affected with syphilis, but it is characteristic of particular stages of syphilis. In primary and recent secondary stages it is almost never present, (according to Baermann and Heinmann it is never present the first two weeks after the infection; in the later secondary stage, it is more frequent, in the tertiary stage almost constant, and disappears only when the process has become stationary in every sense of the word. The reaction can be called forth or strengthened in these different stages by treatment. This is not true of paralysis, which reacts weakly and not in a large percentage of cases to luetin, and the reaction is not parallel to the WR. In other conditions the WR and the luetin reaction are about parallel.

Nanu-Muscel, Alexanderescu-Dersca and Friedman⁴⁰ review work of a number of authors. Gradwohl used the reaction in 44 cases; it was always negative in primary syphilis, often negative in untreated secondary, and in a few cases of latent and parasyphilitic disease, but positive in all tertiary cases and treated secondaries, especially after salvarsan injection. Robinson used the luetic reaction in 63 cases of syphilis and 108 of miscellaneous skin disease; in untreated primary and secondary it was always negative; in treated secondary sometimes positive; in all cases of tertiary, latent and late syphilis positive.

Nobl and Fluss found the reaction negative in primary and secondary cases with manifest symptoms; but positive in treated ones; they have used the test in about 100 cases, but say they have not decided as to its specificity. Kaemmerer in 65 syphilitic cases had only 21 positive results and 44 negative. Rytina found that the luetin test is less reliable than the WR in primary and secondary syphilis, but

superior to it in tertiary, latent, congenital and parasyphilis.

It has a greater prognostic value than the WR in determining when a patient is cured.

Wolfsohn regards the reaction as specific; of the greatest value in latent and tertiary syphilis. Loewenstein used the reaction in 15 cases and had 90 per cent positive results in congenital syphilis, 100 per cent in parasyphilis and tertiary. Gavini had a single doubtful positive in primary syphilis, 35 per cent positive in secondary, 40 per cent in tertiary; parasyphilis was negative. Schmitter had 55 per cent positives in recent cases and 90 per cent in old cases; no difference between those treated and not treated with salvarsan. Fox used the test in 100 cases and had 43 per cent positives in secondary syphilis and 51 per cent in tertiary and latent. Geber found that the luetin test is more reliable than the WR in the later periods of syphilis. Bellantoni found it positive in all cases of active syphilis. Fagioli and Fisichella had all negatives in primary, positives in 2 of 10 secondaries, in 10 of 12 tertiary and in 7 of 12 latent. Nichols found parallelism between WR and Noguchi; the latter is to be preferred because of its simplicity. Kaliski found 95 per cent positives in tertiary and cerebrospinal syphilis. Foster had 61 per cent positives in the secondary stage, 40 per cent in tertiary, 59 per cent in latent. Cedercreutz had 72 per cent positives in tertiary syphilis and 25 per cent in control cases (gonorrhoea and non-syphilitic skin diseases). A. Marie and Broughton-Alcock had 74 per cent positives in parasyphilis, 100 per cent in syphilitic paralysis. P. Weil and Giroux had negative results in all except three cases of unilateral paralysis. Boas and Detlevsen had positives in all of 20 cases of tertiary and 3 of congenital syphilis; positives in 7 of 14 primaries, 47 of 102 secondaries and 2 of 28 dementia paralytica; also positives in 15 of 124 control cases. Desneux found the reaction positive in tertiary syphilis and constantly negative in tabo-paralysis. He quotes several other authors, but does not give percentage results.

Adding up the cases of all these authors they get the following results:

	%	
Primary syphilis	124 cases, luetin positive in 33	WR in 71.5
Secondary syphilis	720 cases, luetin positive in 47	WR in 80
Tertiary syphilis	352 cases, luetin positive in 78	WR in 81
Latent syphilis	291 cases, luetin positive in 65	WR in 58
Congenital syphilis	112 cases, luetin positive in 71	WR in 68
Tabes syphilis	149 cases, luetin positive in 47	WR in 65
Paralysis syphilis	314 cases, luetin positive in 56	WR in 62

The authors themselves used the luetin reaction in 155 cases with the following results:

Most of the positive results were in tertiary syphilis, excluding tabes; in these cases 89 per cent were positive; in tabes 20 per cent were positive; in secondary 47 per cent; in non-syphilitic conditions 98 per cent were negative. On comparing the WR and luetin in 15 cases of secondary syphilis, the WR was negative and the luetin positive in 2, while in 37 cases of tertiary the WR was negative and the luetin positive in 12. Often in cases of tertiary and latents the WR is negative and the luetin is then the only means of diagnosis. This article gives a complete bibliography.

Corson-White and Ludlow⁵ say, "The luetin test devised by Noguchi, besides the decided advantage of a true specificity, gives the most constant results in tertiary, latent and late hereditary cases."

Kilgore²⁹ gives percentages and comparisons with WR, quoting different authors, giving a summary of over 1,500 cases of syphilis and 2,000 controls. Only 14 of the controls gave positive reactions (12 by Kaliski). These were: Tuberculosis, four cases; nephritis, en-

docarditis, cirrhosis, gout, myasthenia gravis, multiple sclerosis, scrofuloderma, and psoriasis. In Kilgore's own 150 tests, upon 120 cases there were 2 positives in which syphilis could not be proved. The cases from the literature collected by Kilgore give from 65 to 100 per cent positives in tertiary and latent syphilis, cerebrospinal 30 to 80 per cent, congenital 10 to 95 per cent. Kilgore's 120 cases included 36 cases of syphilis and 84 controls.

The following table shows the results in syphilitic cases:

LUETIN AND WASSERMANN TESTS IN THIRTY-SIX CASES OF SYPHILIS

	No. of Cases	Luetin Test, Positive	Wassermann, Positive	Luetin Pos. with Negative Wass.	Luetin Positive, Without Treatment.	Luetin Neg. before Treatment and Pos. after Treatment
Tertiary and latent	22	14=64%	18*=80%	3	8†	2
Cerebrospinal parasymphilis	12	5=42%	9 =75%	1‡	1	2
Congenital .	2	0	1	..	..	..

*The figures in this column are high because they include some cases in which the Wasserman reaction was negative in the blood and only weakly or moderately positive in the spinal fluid.

†It is well understood that the luetin reaction is more often positive in treated than in untreated cases, but the low number here shown of cases positive without treatment is partly due to the fact that many of the patients entered the hospital with the diagnosis already made, and treatment was begun at once before the luetin reaction could be observed.

‡Blood Wassermann negative four times. The Wassermann on the spinal fluid was weakly positive.

He concludes as follows: "In 120 tests there were but five reactions which were not typically negative but which were too superficial and faded too rapidly to be called positive. One of these was in a case of syphilis which gave a positive reaction on second inoculation. Two were apparently non-syphilitic, and the other two have just been described.

The luetin test is of practical value in a few cases of late syphilis (four out of thirty-six)

in which it is positive when the Wassermann is negative.

Second injections apparently do not give positive reactions in non-syphilitic cases.

Vedder and Borden⁴⁸ give a comparison of the Wassermann and luetin reactions in 744 individuals. The results of this examination are shown in Table I.

Table I. (Vedder and Borden.) Results of Examinations:

Reaction	++	+	+	—	Total
Wassermann.....	100	56	123	465	744
Per cent.....	13.30	7.52	16.53	62.50	
Luetin.....	45	194	165	340	744
Per cent.....	6.04	26.07	22.17	45.70	

Analyzing their tables more in detail, they arrive at the following conclusions:

"It is therefore clear, providing the results of both the luetin and Wasserman tests as we perform them are accurate and reliable, that these two tests complement each other to a certain extent. In other words, had we used the Wassermann reaction alone, and counted both double plus and plus reactions, we would have found 156 positive, or 20.8 per cent of syphilis; if we had used the luetin reaction alone we would have found 239 positive, or 32.1 per cent of syphilis. But by using both tests, we find 338 positive, (156 positive by Wassermann, 239 positive by luetin, minus 57 positive by both tests), or 45.4 per cent of syphilis.

"It is also interesting to note that there were only 57 cases, or 7.66 per cent that were positive to both tests, while 406 cases, or 54.57 per cent were negative by both tests, leaving 281 cases or 37.76 per cent that were positive by one test, but negative by the other. Eighty per cent of the men in this series were between 50 and 80 years of age, and when syphilis was present, it was with rare exceptions in the tertiary or latent stages." This, in the opinion of the authors, confirms Noguchi's observations (*vide supra*).

Moore, J. W.³⁶ says the Noguchi reaction has been used on 80 cases at Ward's Island. Fifty undoubted cases of paresis gave 48 positive results. Of three cases of cerebral syphilis, two gave positive reactions. Of the non-paralytic cases tested, five were alcoholic psychoses, two manic-depressive, one para-

noiac, one imbecile, and one diagnosed as Korsakow's delirium, but which proved at autopsy to be due to fractured skull with extensive diffuse dural haematoma. Only one of the non-paralytic cases gave a positive reaction. In five doubtful cases there were two positive and three negative results. Four cases of paralysis that were negative to the WR were positive to Noguchi; four gave the WR much less definitely than the Noguchi; in no case was the WR the more conclusive of the two.

Bleechmann, Delort and Tulasne³, after testing 230 children and analyzing 274 cases in the literature, arrived at the conclusion that luetin should be disregarded in pediatric practice if the WR is negative.

It is clear from the data here submitted that the luetin reaction has a distinct place in the diagnosis of syphilis. In a measure it is complementary to the Wassermann reaction. A slightly larger per cent of cases of latent and tertiary syphilis and syphilis of the nervous system will give a positive luetin, when the Wassermann reaction is negative. Even in such cases, however, the luetin test often fails when the WR is positive.

Examination of Sections of Tissue for the Spirochete.

Tissue sections, when other means of diagnosis are available, are not often obtained during life. Excised glands may thus be examined in cases where the differential diagnosis from tuberculosis or Hodgkins' disease has to be made. In such cases, however, one should not omit a culture test and animal inoculation. The diagnosis of syphilis is always an urgent necessity which amply justifies inoculation of a rabbit's testicle, because the diagnosis not only concerns the patient himself, but also others, and, indeed, posterity. For animal inoculation tests the special vacuum apparatus and centrifuge tube suggested by Baeslack⁵² are very serviceable. A small portion of the material thus obtained may be examined by the dark field method, another portion inoculated into a tube of suitable culture medium, and another injected into the testes of a rabbit.

The technic of the preparation of sections of tissue is well known. Nothing new in this respect can be reported. Very thin pieces are fixed in formalin and impregnated by the method of Levaditi. After all the soluble reagents have been washed out, the tissue is dehydrated and infiltrated with paraffin, cut into very thin sections, mounted and counterstained, or examined without further treatment. Spirochetes are very numerous in the liver of congenital syphilis and in plaques of syphilitic aortitis.

Other means of diagnosis, such as the epiphanin reaction and the sero-enzyme test proposed by Baeslack, have not been considered in this paper because they are not regularly employed and no collective statistics are available.

Some errors and ambiguities have crept into the first installment of this paper. Some of these are apparent, but on page 346, second column, ninth line from the bottom, should read: "Thirty-six per cent of the twenty-two cases of **secondary syphilis** . . ."

The first leg in the curve on the photographed chart on page 347 should have been omitted. The picture still shows the attempt at erasure, which seems to have been restored by the printer. On the same page, second column, the sentence beginning thirteenth line from the top should read, "The WR should be made in serial strengths up to 1 cc of fluid, the minimum being four times as much as we use of serum in the blood Wassermann test."

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INDICATIONS FOR THE OPERATIVE TREATMENT OF FRACTURES.*

By Battle Malone, M.D., F. A. C. S.
Memphis.

The discussion of the direct fixation of fractures is one which has been indulged in at almost every meeting of surgeons for the past six or eight years. The immediate ef-

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fect of the agitation of this subject, after Mr. Lane's first visit to this country, was the overly enthusiastic practice of cutting down on fractures which did not really require operation; in many instances by men who had not prepared themselves, either by a study of the technique or with the necessary mechanical equipment, for doing successful bone work.

The many crippled limbs necessarily resulting from such indiscreet surgery brought into ill-deserved disfavor the steel plate and other methods for the direct fixation of fractures. The need of a more correct treatment of fractures, was, however, too urgent to allow the operative treatment to be abandoned and those surgeons who have given the subject careful study have found that by observing a rigid asepsis, and with proper equipment, they can treat such fractures as demand it by the open method with a high percentage of gratifying results. Although this has been amply demonstrated, and although the underlying principles have been emphasized repeatedly in the many discussions of the subject, the fact remains that there is still a wide divergence of opinion among surgeons as to the indications for such treatment.

It would seem that it is time for us to get together and agree, in a general way at least, on which fractures we will operate on. No hard and fast rule can be formulated, but the classification, which is here presented, would seem to offer a sound working basis. Fractures in which the open treatment may be considered may be divided into five classes:

1. In the first class should be placed those fractures which we do not expect to unite by bony union, divided into two groups: (a) fractures of the olecranon and fractures of the patella, with rupture of the capsule, and (b) fractures of the neck of the femur. In group (a) we have fractures where operation is, and has long been, recognized as clearly indicated. A careful approximation and mechanical fixation of the fragments gives the only hope of restoration of function. (b) In the treatment of fractures of the femoral neck other measures should be tried before operation is thought of. If impaction exists, which we have been careful not to disturb, we are reasonably certain to get bony union by sim-

ple immobilization. Even when there is no impaction non-operative methods give a sufficiently high proportion of satisfactory results to justify us in treating these cases by such methods and resorting to operation only when we have failed to obtain union. We know that however such fractures are put up there will be no union in a certain percentage of them, because of the interposition between the fragments of a portion of the capsule, making bony union mechanically impossible, and ultimately requiring operation. There seems to be no possible way of recognizing at the outset such a complication as this, or of foreseeing other influences which will retard union. Eventually it may be considered best to subject all such fractures, in those under a certain age, to nailing as the method of choice, but at the present time it is believed best to try non-operative methods first, and in the event of failure the open operation is indicated.

In my own experience most of the cases of non-union of the neck of the femur have been those in which the fracture was not recognized—was not treated at all for several months. Such cases, of course, demand operation, provided no contraindications are to be found in the age of the patient or other conditions.

2. In the second class we would consider fracture dislocations, especially fractures of the surgical neck of the humerus, with dislocation of the head and, of less frequent occurrence, fracture of the femur complicated by a hip joint dislocation. In these cases it is manifestly impossible to reduce by manipulation. Since the only method of returning the head to its socket is by replacing it through an open wound, the opportunity naturally presents itself of securing fixation of the fragments at the same time, by nailing, suturing, or whatever may be the method of choice.

3. In the third class joint fractures present many widely different problems; frequently taxing the ingenuity of the surgeon to the uttermost. Fractures of the condyles of the humerus; T and Y fractures of the elbow; fractures of the femoral condyles; complicated Pott's fractures—each case must be con-

sidered as it arises. Of the fractures enumerated fractures of the condyles of the humerus usually, the others frequently, demand operative treatment. We should always have in mind the two indications in the treatment of fractures: First, to secure approximation of the fragments—reduction; second, to maintain apposition. If we fail to carry out either indication by simpler methods operation is indicated.

It may be well at this point to call attention to the fact that it is not always necessary to fix fragments by any foreign mechanical aids. Frequently, in the class of fractures under consideration, a fragment will be located behind another bony prominence, or is prevented from being replaced by the interposition of some of the soft structures. Through an incision the obstacle may be removed, the fragments slipped back into place and kept there by simple immobilization. Of course, it would be unwise to put a foreign substance into a wound except when necessary for the maintenance of apposition. Many fractures in this class may be so treated that perfect anatomic results are obtained, but we must remember that in joint fractures perfect restoration of the parts anatomically is essential if we are to have perfect restoration of function. So that failure to replace fragments or displacements after reduction as shown by the X-ray—such as might be disregarded in fractures elsewhere—must be corrected by operation.

4. Another class of fractures—every-day fractures—fractures of the shaft of the long bones, cannot always be successfully treated without direct fixation. The fracture above all others in this class which prove troublesome is that of the shaft of the femur in the upper and middle thirds in adults. The older methods of treating this particular fracture are so extremely unsatisfactory that I have about reached the point where I consider plating directly indicated in practically all cases. We do not so often have to operate in the other long bones, but we should not hesitate to do so if the X-ray shows over-

lapping or other displacement after thorough efforts to reduce. It was formerly considered satisfactory, both to surgeon and patient, if a fracture of the femur, or of the tibia, united with less than an inch shortening. Patients are no longer satisfied with such results, and if they see a skiagram of their broken bones showing any deviation from perfect alignment it is hard to convince them that the surgeon has not blundered. Many cases do come with vicious union—angulation overlapping, rotation of axis, which can be corrected only by open operation and probably nowhere are the results so generally satisfactory than from operations for the relief of the deformities caused by vicious union.

5. The last class of fractures in which operation is to be considered is where we have non-union. Of course, nothing suffices except operative treatment, and, while this paper is not intended to discuss methods, Dr. Murphy's teaching has convinced the writer, and probably all of you, that the only method of treating non-union is by autogenous bone transplantation.

Nothing has been said so far about compound fractures and in a discussion limited strictly to the subject of this paper perhaps nothing should be said. Most of the bad results, however, which have been observed following the application of foreign substances, as fixation agencies, have been in compound fractures so treated. The sight of a fractured bone in a wound already open seems to be an irresistible temptation to many surgeons to put on a plate or introduce some other foreign body into the wound. Every observer knows that such a practice enormously increases the danger of infection. Murphy states that 85 per cent of them will suppurate. On the other hand, we know that we can in most cases, by methods that need not be described here, asepticize these wounds and convert them into simple fractures. Then after the wound is healed the same indications for fixation may be carried out, as if the fracture had been a simple one from the outset.

BAD RESULTS OF COLLE'S AND POTT'S FRACTURES AND HOW TO PREVENT SAME.*

By Duncan Eve, Jr., M.D., F. A. C. S.,
Nashville.

Two of the most important fractures which the physician is called to treat are Colle's and Pott's fractures, because of their frequency and the deformities which so often follow.

To obtain good results four things are necessary.

First. Correct diagnosis, which depends upon knowledge of the surgical anatomy.

Second. A careful comparison of the affected side with the sound side. The location of bony prominence in relation to each other must be carefully considered.

Third. Do not attempt reduction of a fracture about a joint except under anaesthetic. It saves pain and suffering to your patient.

Fourth. If possible, X-ray your fractures. Before going into other details about fractures, just a word in regard to crepitus. Crepitus is proof of a fracture, but when called to examine a possible fracture do not disregard the physical signs present and begin to hunt for crepitus. Many bad results have been produced by such examinations. It is gratifying to hear the crepitus, but the nerves and tissues around the fracture are apt to be torn or injured and with such a condition we are bound to have a bad result. If there are not sufficient signs the best method is to put on a temporary splint and use the X-ray by having two plates at right angles to each other.

The fracture which most often leaves a crippled limb is that of Colle's. This is a fracture of the lower end of the radius. The ulna may or may not be fractured. Both the skiagraph and the museum specimens have shown that the fractures are rarely situated at a point higher than three-quarters of an inch above the joint and that the cleavage is often one-half inch or less above the joint,

and in many instances the line of fracture runs into the joint itself. The prominent external landmarks are the styloid processes of radius and ulna, anterior lip or lower end of radius, and thenar and hypothenar eminences. With the normal wrist the styloid process of the radius is on a somewhat lower plane than the process of the ulna. The base of the thenar is lower than the hypothenar. As no muscles are inserted into any of the bony prominences about the wrist that influence deformity of the parts of Colle's fracture, therefore muscular contraction does not enter into the fracture. Another cause is in starting an auto by turning a handle connected with the fly-wheel, may be the occasion of a violent twist backwards, such force producing a clean transverse fracture of the lower end of the radius. The deformity produced by this fracture causes a dorsal displacement of the lower fragment and an elevation on the back of the arm just above the wrist, also corresponding depression on the palmar surface. The upper fragment projects anteriorly, pushing the flexor tendons forward. The head of the ulna, which is usually so prominent posteriorly, disappears from behind and reappears in front. The wrist is broadened because of the rupture of the inferior radio-ulnar ligaments and this is also why the head of the ulna is forced to the front. Also, the styloid of the radius is about as high as that of the ulna. Many of these fractures are complicated by impaction.

In regard to pain—pain on local pressure from without, pain on pressure along the long axis of the bone. The search for pain on local pressure is best made with the tip of the finger, or as Stimson says, "the rubber end of a lead pencil." Thus, a well defined line of tenderness can be traced along the radial side and across the dorsum of the fore-arm just above the wrist. You should find pain at the fracture when the patient is told to squeeze your hand. In regard to a fracture with no marked symptoms or any displacement, **but where they do show localized tenderness**, the X-ray will be of service in this connection.

Treatment—The reason deformity so often follows Colle's fracture is not because the doctor used an improper splint, but because

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reduction was not complete; therefore do not attempt to pull such a fracture into place. To get a good result, first always advise an anaesthetic. The proper method in reducing this fracture is to increase the deformity, unlock the fragments, push the lower fragment down and then flex it forward. Remember the lower fragment is attached to the hand and moves with it, and with the hand extended back about right angles to the forearm, then the lower fragment follows the hand and the impaction is freed. In this position place your thumb over the posterior surface of the lower fragment and push down, at the same time sharply flex the hand and the fracture is reduced. A number of different splints have been used, but in fact the splint is unimportant. No dressing should include the fingers. Union is prompt, therefore remove the splint or splints about the third week. In long standing cases much can be done by osteotomy.

The writer strongly advises the following points in Colle's fracture.

First. Always insist on an anaesthetic to reduce the fracture.

Second. Do not immobilize the fingers.

Third. Remove all splints in three weeks' time.

Fourth. If the patient continues to suffer with great pain two or three days after reduction, the fracture has not been reduced, so do the work over.

Next, we will take up Pott's fracture, a fracture of the lower extremity which often gives a great deal of trouble. Pott's fracture is a fracture of the fibula associated with an outward displacement of the foot. It is an eversion fracture and never inversion, like falling or jumping, forcing the foot to turn outward, also falling sideways when the foot is fixed between rocks. The fibula is fractured anywhere across its lower third. This fracture may or may not be accompanied by a fracture of the tip of the internal malleolus. When the foot turns outward the external surface of the astragalus presses the external malleolus and the fibula is fractured. If the ligaments are strong the fracture is within two and one-half inches of the malleolus, but if the ligaments give away the tip of the ex-

ternal malleolus is fractured. A typical Pott's is when the fracture is high up. Where we have a fracture of the internal malleolus such is due to rupture of the internal lateral ligament and if the pressure is continued with the foot everted, the astragalus presses against the tibio-fibula articulation and forces the tibia and fibula apart, tearing the interosseus ligament and if still more pressure continues we have anterior luxation of the tibia into the notch on the upper surface of the astragalus, which is the most serious complication in a Pott's fracture. In such a condition you can very easily feel the anterior margin of the articular surface of the tibia at the ankle, also it is possible to bring the foot to a right angle with the leg; therefore the deformity in a Pott's fracture depends on the amount of eversion and the amount of force. The deformity as a rule is characteristic. Be sure to compare the two feet. In regard to pain—you can bring out a sharp pain at the seat of fracture in fibula by squeezing the leg about four inches above the ankle. The X-ray tells the story.

Treatment—Be sure to get a careful history of the accident. Always give an anaesthetic to reduce the fracture. If you have a luxation of the tibia forward on the astragalus, extend the foot and then bring the foot forward and flex it and it will come up to an acute angle with the leg. To reduce the eversion of the foot, invert the foot strongly, so as to bring the astragalus back again against the articulating surface at the end of the tibia, keeping it in this position, flexed on the leg and adducted as much as possible. After you reduce the fracture it tends to fall outward. How shall we retain it? I have been satisfied with the Dupuytren's splint—a soft pillow. The leg is kept in this splint about a week's time, or according to the amount of trauma, then apply a plaster paris dressing from below the knee to the base of the toes, with the foot at right angles to the leg and adducted. The object of flexing the foot to right angle with the leg is it brings the wide portion of the astragalus between the malleoli, and also if the ankle joint should be stiff you are able to stand with the heel on the floor and therefore walk without pain.

Applying the cast—first use a posterior splint (several layers), long enough to extend from the toes along the sole and up the calf nearly to the knee. This should be about four inches wide. By this method we do not disturb the fracture. Now apply the circular plaster bandages around the limb and the posterior splint. It is better for the surgeon to hold the leg in the correct position while the assistant applies the cast. The cast is allowed to remain on according to the age, as a rule, four to six weeks.

DISCUSSION ON THE PAPERS OF DR. EVE AND MALONE.

DR. E. DUNBAR NEWELL, Chattanooga: I have enjoyed the paper of Dr. Eve very much. He has brought out some points with which I agree so far as the treatment of these cases are concerned. The most important point in the treatment of a Colles' fracture or a Potts' fracture is a proper diagnosis of the case, and the only way to properly diagnose these cases to be certain is to have an X-ray taken. No man can diagnose these cases of fractures unless he takes an X-ray plate of them. One should take an X-ray at the time for diagnostic purposes, and another after the fracture is set. I do not think it makes any material difference what kind of splint you put on, the patient will get a good result. The most important point is to see to it that you have proper approximation of these fractures. If the patient complains of pain 24 hours after the fracture is set you must do the work over. You can rest assured you have not got a proper approximation of the fragments or the patient would not complain of pain.

The only way to treat these cases properly is to make use of the X-ray as an aid to diagnosis, because while in many cases we think there is perfect apposition, the X-ray will show us that there is improper approximation.

With reference to the paper of Dr. Malone, he is certainly very radical in some respects. When a man says he would plate every fracture of the upper third of the femur, I think he is going too far. It is absolutely unjustifiable because if splints are properly applied, I find there is no such indication for plating in one-fourth or twenty-five per cent of these cases.

As to shortening, if he will use a Hodgen-Smith splint he will not get that shortening; he would not get half an inch shortening. I have many cases in which you could not tell which bone was fractured without an X-ray plate, so I say it is unjustifiable to claim that we should plate all of these cases. Mr. Lane claims that he has one hundred per cent of recoveries in these cases, but the associates of Mr. Lane say that he is mistaken about that. I

have talked to many of them about it. The men over in England say he does not get one hundred per cent of recoveries in these cases. I understood Dr. Malone to say that he plates some of these cases in which there is pus. Mr. Lane says he does not plate pus cases and does not plate compound fractures. Where we have infection in a case of fracture or where we have a compound fracture, I do not think we should use a plate.

DR. WILLIAM BRITT BURNS, Memphis, I have been listening to discussions on fractures and the plating of them for several years. Some years ago I objected to too much plating and to the application of too much hardware, and it occurred to me at the time that the plating of compound fractures seemed to me to be the method indicated rather than the use of plates on simple fractures or fractures in locations that could be easily reduced and the fragments held in position. I have done a little plating. I have been old-fashioned enough to believe that I could get results without plating, but it so happens that most of my plating has been made in compound fractures and in some instances of multiple fractures. With the exception of a little necrosis, I have not had occasion to regret this step. I believe the logical fixation in plating is the bone plate. I have not got my consent to cut down on simple fractures and plate them, but I believe the time will come, if it is not already here, and we are seeing every day, less and less of this plating. The fixation of fractures is a matter of common sense, and I believe that we are going to see and use fewer metal plates on simple fractures. I believe, too, we will see more plates on compound fractures where the fragment cannot be held in apposition, particularly at the ends of bones like the olecranon and nearer joints.

I had a singular instance recently in a Colles' fracture and have not been able to find a solution of it unless the man was lying to me, and I do not believe he was lying. I dismissed a case of fracture with what I regarded as a perfect result. The patient came back at the end of a month with considerable separation of the bones of forearm. I tried to bend the arm over my knee to see if there was complete union, and I was satisfied there was, and dismissed the patient with the satisfaction that I had secured a perfect result. In twenty days thereafter I saw the case again and found the bones separated, and there was some deformity. I do not know what this patient could have done unless he fell down.

DR. S. R. MILLER, Knoxville: The last word has not been said on fractures. I do not believe it will be said when the history of the great European war is written; for I consider bone surgery the most difficult surgery we have to do. Notwithstanding that fact, there are a great many practitioners who, though they do no other kind of surgery, will treat in the country and in small towns, and also in the cities, fractures of a serious char-

acter, without surgical aid from one who is skilled in that kind of work.

I want to say one word more in reference to these Colles' fractures. We are discussing here typical Colles' fracture. When men say any kind of splints will do, when once you get good reduction, it is a statement to which we cannot take exception; but there are a great many comminuted fractures, Barton's fractures, and other serious fractures about the wrist joint, that are not typical Colles' fractures, and cannot be held in position with a simple dressing of any character. In order to hold them with a simple splint they must be the typical Colles' fracture, and not a comminuted fracture, Barton's fracture, or some other complicated fracture.

DR. EVE (closing on his part): It is hardly necessary for me to say anything in reference to the remarks of Dr. Miller concerning Barton's fracture because by paper was on Colles' fracture.

Like Dr. Newell, who discussed the paper of Dr. Malone, I would take issue with him in regard to fracture of the femur. We treat these fractures here, and the majority of surgeons here do likewise, with Hodgen's splint, or by the modified Brown method. Dr. McCabe and Dr. Gallagher have written several articles on this subject during the last two or three years. I do not see why we should cut down on these fractures and plate them, because recently at the Cook County Hospital the surgeons connected with that institution plated 458 cases of fracture, and in 48 per cent of them the plates went to the bad on account of infection and had to be removed. Why should we take chances on having to remove fifty per cent of these plates when we can use a Hodgen's splint? I do not believe I have had a case in which shortening has been more than one-half inch—in the majority of them it has been one-quarter inch or less. If you put the fractured limbs of these patients in Hodgen's splints they can read and write, eat and drink, get on the bed-pan, and as soon as you put them in a splint they are comfortable in a short time without any pain. They go on for six weeks and gradually go about on crutches. There is no trouble with the knee or ankle so far as stiffness is concerned, and I do not see why we should plate all fractures of the femur.

DR. MALONE (closing): With reference to the remarks made by Dr. Eve, the important thing in a Colles' fracture is to reduce it, and after it is reduced there is practically no tendency for the bones to slip. If it is reduced properly it will stay reduced. Dr. Roberts, of Philadelphia, some years ago pointed out that if you put a strip of adhesive plaster on these cases of fracture, that is all that is necessary; but we do not feel safe without the splint. If the fracture is reduced properly, we need not worry about it. On the other hand, in a Potts' fracture the opposite holds true. It is not hard to

reduce a Potts' fracture, but it is difficult to maintain it in apposition when it is reduced.

One important point Dr. Eve did not bring out in connection with Potts' fracture, is that the chief damage is not done to the bone, but to the anterior and posterior inferior tibio-fibular ligaments, the ligaments which hold the tibia and fibula together at the lower end. If you put it up in such a position that these bones are snugly kept together and keep the patient off of the foot long enough for firm organic union to take place, you will have a good result. The reason that there is so much trouble from a Potts' fracture is not so much that it is not set properly, but you allow the patient to get on the foot too soon. The patient should not put his weight on his foot from six to seven weeks after fracture has occurred. The bones are strong enough, but the ligaments are not. If the patient walks the astragalus will have been pushed out and the patient will be a cripple all his life.

In regard to Colles' fracture, just one more point, and this point none of you gentlemen have mentioned in discussing the paper, and that is the importance of having an X-ray after the fracture is set. Personally, I do not think it is so very important, and I do not care whether I have an X-ray before or not. The history is typical of such a fracture,* and if an X-ray is made you should see to it that the fracture is set right. That is the important thing to do.

In regard to what Dr. Eve and Dr. Newell have to say concerning my position being radical in plating fractures of the femur, I can only say I am not quite expert enough to get good results without plating. I would not plate a bone if I could get along without it. I cannot effect reduction and maintain the fragments in apposition by any other method I have known, and I have tried the use of the Hodgen's splint. But so frequently it happens that I cannot get proper reduction. There will be abduction of the upper fragment, high up possibly, where you have a fracture just below the trochanter, the fragment will be pulled in, and I cannot get it back in place. If they can, they are much better surgeons than I am.

REPORT OF TECHNIQUE AND RESULTS IN EIGHT GASSERIAN GANGLION OPERATIONS.*

By E. J. Johnson, M.D.,
Memphis, Tenn.

It is now generally conceded by all those familiar with the horrors and agonies of tic douloureux that the only certain and perma-

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nent relief to the sufferer is to be obtained by an operation upon the Gasserian ganglion or its posterior root. I do not mean to insist upon this step without first having exhausted all reasonable endeavors to bring relief by tentative measures directed toward an improvement of the entire system. In other words, the digestive tract especially, should be looked after in the hopes of overcoming whatever influences may be tending to produce irritating toxins. The nose and its communicating sinuses should be carefully studied for whatever abnormality or pathological condition might exist, and these should be properly cared for. The mouth, teeth and gums should also receive the most careful consideration and attention, but this should not be carried to the useless, reckless extent commonly seen in most of these sufferers, wherein the teeth have been extracted unnecessarily, laboring under false and fruitless hope that relief can thus be obtained. I might go further and say that operations upon the branches of the fifth nerve as they emerge from their various foramina are justifiable, especially where the pain seems situated more in the cutaneous areas. Much relief has been had in many cases by the removal of these affected branches. The power of regeneration, however, is well known and as a usual thing recurrence of pain is only a matter of time.

It is scarcely necessary to go into the technique of these peripheral nerve operations, as it is always exceedingly simple and can usually be done under local anaesthesia. The supra and infra-orbital branches are easy of access at their points of exit through the supra and infra-orbital openings. The operation of their removal consists in exposing them through a small incision, after which the nerve is gently separated and firmly grasped and gradually through a process of avulsion, the nerve is twisted and pulled in both directions so as to get as much of it away as possible. In order to offset the possibility of regeneration, a great many cunning devices have been used. Perhaps none are better than the silver rivets devised by Moschowitz. These are driven into the foramina and allowed to remain, thereby preventing regeneration of the nerve to its superficial distribution. Unfortunately, the results are

rarely lasting and are never to be hoped for in cases wherein the irritation is situated intracranially.

The injection of alcohol into one or all of the three branches as they emerge from their foramina of exit in the skull, deserves honorable mention and has proven useful in a number of cases wherein the physical condition of the patient would forbid a more hazardous undertaking. Unfortunately for this procedure, recurrences are nearly always to be expected within a few months. These repeated injections have a tendency to ultimately impair the function of the muscles of mastication. The injection of alcohol in a nerve situated as deeply as these are, carries with it considerably more hazard, in my opinion, than the good results can justify.

After all has been said and done in the way of temporizing, unfortunately a large per cent of these cases continue to suffer indescribable agonies and reach the surgeon, not only hopelessly debilitated, but confirmed addicts to the use of opiates; both of which could be avoided by well-timed and carefully performed radical operation.

In reporting my eight cases, all of whom have recovered their health and are free from tic douloureux, I do not wish to insist upon the operation that I do as being better than many of the other procedures, but to merely state the facts as they are. I operated upon my first case nearly nine years ago, since which time I have operated upon a case each year. My first four cases were exceedingly difficult and the operations bloody, due to the fact that at that time I had not learned the importance of tying the common carotid artery upon the side on which the operation was to be done. My last four cases have been as bloodless as could be desired, because I now tie the common carotid and in none of these cases have I seen any ill effect from this preliminary procedure.

The window that I make in the skull is situated just over the ear and is in no respect unlike the opening used in the Spiller-Frazier method nor the method of Harvey Cushing, except, perhaps, mine is a little larger and situated slightly posterior to theirs. It has long since been demonstrated by Spiller and others that the mere division of the posterior

root of the ganglion would cause permanent degeneration of the sensory portion of the nerve between the ganglion and its origin in the pons. This holds good only in the sensory nerves, as there is a regeneration of the motor portion of the nerve after a few month's time. Most of the better surgeons are now dividing the sensory root between the ganglion and pons, thus securing permanent relief from pain, owing to the inherent tendency of this nerve to permanent degeneration after the division in this immediate region. There is some objection to be urged to this method, because the sensory and motor roots lie together and exactly parallel from their origin in the pons out to the ganglion and it is almost impossible to divide one without the other in this situation, even though the sensory root is the larger. Taylor insists that it makes no especial difference if both these roots are divided, because of the fact that the motor root will become regenerated in a few months. During this time, however, the patient necessarily suffers much inconvenience from a one-sided paralysis. Another serious objection to this division lies in the fact that the ophthalmic branch is put out of commission along with the supra- and infra-maxillary branches with the consequent corneal changes that may occur. We must remember that the ophthalmic division is rarely affected seriously in *tic douloureux* and by careful manipulation, it has so far been my rule to remove such portion of the ganglion as involves these supra- and infra-maxillary divisions only. This leaves enough connected with the ophthalmic to give its function and so far I have had no recurrence in this remaining branch, nor is the motor root, which lies under the ganglion, disturbed, nor its function incapacitated. It must be said, however, that the method which I use is probably more difficult and calls for more gentleness and refinement of technique.

It is possible that if I had begun this series of operations by dividing both the sensory and motor nerve roots posteriorly to the ganglion, that I would have been quite as satisfied with it as other surgeons who have had such a broad experience with this simpler technique. It must be admitted, however, that no efforts, however great, are spent in vain

just at this point, because after all the principal difficulty is encountered here and our actual results must always be kept foremost in our minds.

To refresh ourselves a little on the anatomy of the parts, it will be remembered that the trigeminal nerve or trifacial nerve arises from the pons by two roots—a sensory and a motor. These two roots pass slightly forward and the sensory or larger root terminates in the Gasserian ganglion, under the motor root passes, but is not fused with the ganglion and is not a part of it. The ganglion lies in a fossa or Meckel's cave, which is situated on the superior surface of the petrous portion of the temporal bone near its termination and very close to the internal carotid foramina and cavernous sinus. The ganglion gives off three roots, the ophthalmic and the supra- and infra-maxillary, and it is to these latter two branches, including that portion of the ganglion to which my attention has been directed in this series of operations. None of my patients have suffered any appreciable ill effects, except the loss of sensation throughout the distribution of these two branches and they have all made a very happy recovery, which is not especially astonishing, considering that the mortality has been reduced, under recent refinements of technique covering a period of the past ten years, to something under four per cent. To be exact, Frazier, quoting from 230 cases reported by Horsley, Lexer, Dollinger, Cushing and himself, places the mortality at 3.7 per cent. Taylor says, "the authors who speak of the operation with its high mortality have gained their entire erroneous impressions from statistics made up before the operation had been brought to its present high state of perfection."

Five of my cases reached my hands in a very desperate physical and mental condition. Two of the cases had more than once attempted self destruction, seeking relief from the intolerable and never-ending agony, which they were enduring in spite of large doses of opium, covering a long period of time. To those of you who have seen this intense form of human agony, you can realize that they have no words adequate to express their horrible torment. Dante's inferno would be a

peaceful abiding place for them, compared with what they are forced to endure. There comes to him, who relieves these tortured mortals, a sense of satisfaction too supreme for words.

DISCUSSION.

DR. R. E. FORT, Nashville: The paper of Dr. Johnson is one of great interest to the surgeon from the fact that, so far as I know, no other man is able to report eight consecutive successful Gasserian ganglion operations. He is certainly to be congratulated, and I would not advise any change in the method of operating when one can secure such results as he has reported by the technic which he has described.

We all know, as the doctor says, that the inferno described by Dante is a pleasure resort as compared with the tortures which these people suffer. My own judgment has been that all of the reasonable methods of cure, even though they are not found successful, should be exhausted before ganglion excision is advised. It has been my custom to give such advice because the mortality in my hands and in the hands of other surgeons whose work I am familiar with has not been as favorable as that described by Dr. Johnson. This operation is one of those intracranial operations which is of major importance, and he has been marvelously successful in this as he has in his other surgical work, and yet this will never become a simple procedure. From the anatomical relations of the ganglion, this operation must necessarily remain one of the gravest we have to perform.

The silver screw he spoke of was first used by Moschowitz, later by Dr. Charles H. Mayo and John B. Deaver in this country, but especially by Dr. Charles Mayo, and it has in a reasonable number of cases been successful in my hands. Pulling the nerve out from the foramen, splitting it, and driving a silver nail in the foramen has prevented regeneration in twenty to fifty per cent of the patients upon whom I have done this.

We have resorted to alcohol injections repeatedly, but a good deal depends upon the accuracy with which this is done. These injections will give relief for a period of anywhere from two to six months, and I recall one case of a young man in which two injections effected a permanent cure, the patient remaining perfectly well, so far as I know, up to this time. In another case of a woman the patient has remained well eighteen months after the last injection. In still another case in which three injections were given, the patient has remained well for over two years. Whether this is sufficiently long to consider a complete cure is a question which time only will tell.

Where we have pathology beyond the foramen, where it is situated in the ganglion itself, such a case requires a true separation or ganglion section.

As to the technic of the operation, I have nothing to say. Dr. Johnson's technique is excellent, and in fact, I do not know of any better technic than that which he employs. His results are so good that I would not advise a change in the technic.

There is one thing as a surgeon I would like to say to an audience composed of surgeons and general practitioners, and that is, do not consider the removal of the Gasserian ganglion ever to be a simple surgical procedure. It is one of the gravest procedures we have to contend with or can undertake, and we should exhaust every means at our command before we resort to it.

DR. JOHNSON (closing): I wish to thank Dr. Fort for his complimentary remarks. I quite agree with him that he is entirely justified in saying that this operation should not be considered a simple or ordinary one as compared with operations in other parts of the human economy. I really think that the extraordinary care taken in my technic in maintaining ideal surgical cleanliness always from the start to the finish has helped me to avoid infection. Infection seems to have caused more fatalities or a higher mortality than anything else, although hemorrhage has caused the high mortality we have had in Gasserian ganglion operations.

MALIGNANCY-CANCER.*

By John A. Graham, M.D.,
Chicago, Ill.

Mr. President, members of the West Tennessee Medical and Surgical Association, ladies and gentlemen, I am greatly honored at the privilege of being your guest.

I have chosen **Malignancy** for my subject, **interesting** to me—and I trust to you—because it has always been a question of investigation, prevention and treatment since the earliest history of medicine; **important**, because it bears so directly upon the welfare of the human race. I do not hope to tell you anything that you do not already know, but rather to impress upon you important facts which probably have escaped your memory.

Early workers were handicapped because they did not have at their disposal high power microscopes, and were not surrounded by laboratories or laboratory investigators which are so prevalent today and which have paved

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the way to more efficient methods of diagnosis than existed a few years ago.

On account of the above fact, the limited means of investigation and the tendency to call any chronic ulcerated condition cancer, we constantly groped in the dark and were misled by false diagnosis. Many cases of cancer were never diagnosed as such. Time was an important element before a positive diagnosis was made; now, we know, time is also an important element in the **prevention** and **cure** of cancer.

As far back as literature extends, various fakes and cults, principally among the more recent ones, Christian Science, wrought their wonderful cures of cancer in conditions diagnosed as cancer by any member of the "flock," which often included the most illiterate type of humanity who happened to be saturated with the religious "bug"—the absurdity of which is obvious.

Various theories as to the origin of cancer are so voluminous and the diversity of opinion so great that I carefully avoid that field.

As a point of interest, I might state that cancer is not only confined to the human race in all walks of life, all classes, all climates, all seasons, but it has been proven beyond a doubt that it attacks many of the lower animals, and singular to say, most animals that are associated with the human race and known as domestic animals; for example, horses, cats, sheep, dogs. Again, other animals which are removed a step farther from the human race but which are intimately associated with it in many ways, as tame rats, tame mice, rabbits and guinea pigs; these are often attacked by cancer. The above facts are not only most interesting, but may prove of invaluable service in solving many questions of the cancer problem.

Distribution.

Carcinoma is more prevalent in the temperate than in the torrid and frigid zones. It is said to be found with considerable rarity among the Eskimo and South Sea islanders. Of the western hemisphere, North America leads in having the largest percentage of malignant cases. This fact has been well proven by Bainbridge and his workers.

Etiological Consideration.

It is well here to say a few words in regard to the various theories which exist and which bear upon etiology, and which also bear directly upon the cure.

Theories.

Virchow's—Irritation produced new embryonal tissue (epithelial) undifferentiated and it differentiates itself by tumor formation.

Senn's—Misplaced epithelium.

Thiersch's—With old age epithelium outgrows connective tissue; the latter not being able to hold the former in check allows it to migrate into foreign fields, practically the same as Senn's theory.

Waldery's—Exactly the opposite from Thiersch's, except that the excessive blood supply which he has observed in new growths stirs up the epithelial tissue growth.

Adami—A cell which has lost its identity and never recovers it, continues to take up nourishment from the system, thereby acting as a parasite.

That epithelial tissue becomes displaced whether by cutting off or a wandering process, is well demonstrated in carcinoma of any portion of the body. The lip with its normal epithelium; but let this epithelium branch out to muscular tissue in the lip, histologically, we are dealing with a cancer. The same is true in the uterus; in fact, in any organ of the body. Our diagnosis is made positive by finding epithelial tissue in foreign fields. Metastasis in regional gland tissue is demonstrated by finding epithelial nests in that gland tissue. Further proof of misplaced tissue is most beautifully demonstrated by this most rare specimen of teratoma of the kidney, which contains seven perfect teeth, a large bunch of hair and, undoubtedly, a simulation of the lower jaw. (Specimen shown.)

The parasitic theory has been disputed by most investigators. Koch's law has not been fulfilled and a parasite has never been found identical in all cases. Cultivation of parasites has been unsuccessful. To say that cancer acts as a parasite is well demonstrated in pretty nearly every case of cancer that has been operated on with any degree of success.

For example, patients usually regain their failing strength, increase in weight and their general metabolism seems to again resume its normal functions. This is not due to the fact that the neoplasm was encroaching upon the digestive tract in any way which might as a mechanical means obstruct the taking and assimilation of food. Cancer of the uterus, for example, does not encroach upon the alimentary tract, still cachexia is one of the early symptoms of the disease. Carcinoma of the breast well illustrates this property also. As an example, I might mention a case of a patient, aged 56, who lost weight most rapidly—36 pounds in three months. I removed a large tumor from the large bowel, which proved to be an alveolar carcinoma. The patient made an uneventful recovery. He began to gain weight almost immediately; May 8th, 1915, he weighed 192, a total gain of 33 pounds since the 21st of November, 1914. Such cases are not infrequent. We all have had them, but I am sure a great many of us have simply taken much for granted without investigating the cause.

While we are groping in the dark, endeavoring to work out a direct etiology by proving certain factors and disapproving others, we nevertheless have arrived at some very definite conditions which are associated with cancer too often to be called a coincidence.

In 509 cases of cancer of the lip collected by Bainbridge, 473 or about 92 per cent were in men and probably 65 per cent of this number were in men who gave histories of injury to the lower lip, this injury being of a chronic nature, such as is found in pipe smokers, and indeed so often found that it has become known as pipe smokers' cancer.

Bainbridge reports upon 43,400 patients (covering a period of ten years) collected in India. He cites some very interesting facts, and further bears out the theory that chronic inflammation has a direct bearing on the etiology of carcinoma. Eight hundred of the patients showed a cancer in some part of the body and it was found that the largest majority were located on the anterior abdominal wall, not at all a common location for a malignant neoplasm. It was further demonstrated that a custom of this particular tribe necessitated the wearing of an earthen basket

beneath their cloak and immediately next to the skin. This contained burning charcoal for the purpose of keeping their bodies warm. It was found to have produced a chronic irritation from constant friction and occasional burn, and in this particular location most of the cancers occurred.

Probably one woman in every seven is marked and her life will be terminated by malignancy. Why? Probably because of her anatomical makeup and from the fact that she is a woman, she is subject to more injury and chronic inflammations.

The uterus with its torn and neglected cervix, one that has borne many children and that has been the seat of a chronic metritis is one of the most important seats as a starting point for malignancy.

Statistics have well proven that 85 per cent of tumors found in the breasts of women who have reached forty years of age are malignant, and many give a history of injury produced most often in lactation.

The stomach occupies one of the most important fields for an early diagnosis and an attempt at preventive rather than curative treatment. We all know the hopeless picture an advanced carcinoma of the stomach presents. To antedate this condition 60 per cent at least of those cases give a history of ulcer in their early life. For that reason ulcers should receive the proper treatment, either operative or medicinal, with the hope of establishing a permanent cure.

To cite another incident of the Bainbridge statistics, he found among the inhabitants of India carcinoma of the tongue, lip and cheek very prevalent. In studying their private life, it was found that they constantly chewed betel leaves, tobacco, a certain kind of a nut and slaked lime. This mixture was constantly held in the hollow of the cheek, where it came in contact with the tongue and lip, undoubtedly causing an irritation which was more than incidental in the carcinomatous etiology.

We also find carcinoma resulting from pigmented birth marks, scar tissue, scars produced by burns and, in my own private histories, I have two on record with a well-defined carcinoma resulting from an old varicose ulcerous condition of the leg.

Diagnosis.

No available method for an early diagnosis should be neglected. Time does not permit the discussion of various laboratory means, including serological diagnosis. Unfortunately, we are not all surrounded by a well equipped laboratories and the clinical symptoms as observed by the general practitioner and family physician must necessarily be the first to be observed. If, in treating or examining patients who have reached the cancerous age, we keep in mind a few of the important early symptoms, taking a complete history, making a thorough examination, weighing all evidence carefully, withholding judgment while in doubt, we cannot go far astray. In many cases, an early diagnosis is almost impossible, but it is far better to err on the right side than to wait until all the symptoms of cancer are fulfilled when the chances of recovery after a complete operation have been lost.

Tumors without a capsule are looked upon as malignant. The clinical demonstration of a capsule in a tumor of the breast is rather a difficult proposition. Waiting for glandular enlargement is to be discouraged because glandular enlargements often indicate metastasis. A pre-existing history of stomach trouble in a patient who has reached forty years of age should never be neglected, but should be looked upon as an extremely dangerous symptom.

Probably one of the least often investigated symptoms in woman is an excessive menstruation while she heretofore only menstruated moderately. We condole her with the excuse that she is reaching "the change of life," giving her at the same time some innocent placebo and telling her to come back after several months. This symptom with an offensive discharge should make us insist upon the most radical means of treatment.

A small lump in the breast of a woman forty years of age means cancer in 85 cases out of every 100. We should not try to demonstrate a capsule or the mobility of this tumor; we are too apt to make a mistake. Rather we should insist that our diagnosis is correct, and then proceed accordingly.

Is cancer increasing, and are all our efforts

for a curative measure fruitless? I think not; rather I think that the great advances in medicine have increased the diagnostic skill of the doctor and, as a result, carcinoma is recognized more often than heretofore.

Treatment.

Only a few words on treatment: For the sake of brevity, I have divided carcinoma into two classes, viz., those in which a radical operation is indicated and those cases which come to us after the ravages of the disease have well overwhelmed the fighting powers of the victim.

In treating the first class, surgery stands pre-eminent. Operate early and extensively. Valuable time is often lost by the patient trying the innumerable "curealls," and I might say right here that the "fakes" and "near-fakes" have fleeced more people who are really suffering from cancer or think they are than one can imagine.

Many times the surgeon is confronted with the most difficult task in drawing a line between the so-called operable and inoperable cases, as I shall endeavor to prove by reporting a few special cases of most vital interest. Cases which often come to us, apparently well past the operable period can yet be saved and may experience the best of health for years and never have a recurrence.

Palpating a tumor of the breast should be done with the greatest possible care; the palm of the hand should be gently pressed over the breast so the pressure is evenly distributed, and the smallest nodule can be felt. Cancer cells are, without a question, loosened by rough handling and are carried to other parts of the body.

Operate toward a suspected malignant growth, rather than away from it. In removal of a breast, clean the axilla and cut off the attachment of the pectoralis major from the humerus before extending your incision around the breast. Also block lymphatics and blood vessels when possible.

Wertheim's operation is a step in the right direction for the best results in carcinoma of the uterus.

The best results will be attained in cancer of the tongue by cleaning out the regional glands and tying as many vessels as possible

before one attempts to remove the tongue or any part of it.

In considering the second class of cases, or those cases which have apparently reached a point of hopelessness, we indeed are confronted with a desperate and often pathetic problem.

We should exercise the utmost care and consideration in our advice.

By the so-called appallative treatment, many of the patients are made comfortable and many gain in weight and may go on for months before the old symptoms begin to recur.

Cauterizing by actual heat or by chemicals has long been a valuable step forward.

Starvation by ligating vessels and lymphatic block in many cases has proven beneficial.

Acetone, local application.

Paraffin injection into main arterial trunks. Various other topical (?) applications to reduce disgusting discharges and kill odors all tend to raise the hopes and stay the progress of the disease.

Radium was heralded with much hope and enthusiasm, but results are indefinite and should be used as a supporter of surgery, or in such cases which have gone beyond surgical aid. X-ray should be used most cautiously—rays too weak in penetrating force are stimulating and may do harm.

In conclusion, I would say that in separating operable from inoperable cases, we must not lose sight of the fact that there is always a possibility of error, no matter how careful we may be in diagnosis, as I will show in a few cases reported here:

No. 1—Mrs. R., age 44, carcinoma of breast. First recurrence one year later in scar from removal of breast. This was removed. After second operation patient developed a general carcinosis, dying three years after removal of breast. Post-mortem shows nodules in pretty nearly every organ of body; 103 nodules on anterior abdominal wall and chest; 20 nodules histologically were identical with the primary cancer.

No. 2—Mrs. E., age 52, carcinoma neck and body of uterus with involvement of parimetra. August 1, 1909; entered hospital. Case inoperable. Made local applications of acetone. Patient insane before entering hospital. Was removed to private sanitarium and died November 9, 1909. Cause of death undoubtedly carcinoma.

No. 3—Mrs. E., age 57, carcinoma involving cervical glands of neck. Operated May 25, 1910. Recovery. Patient remains well today. Case was diagnosed as carcinoma by five men and an attempt was made to remove the glands, but the doctor only incised the glands and decided the case was inoperable. I did a radical operation, cleaning out all glands and ligating many vessels. On microscopic section we find tubercular process instead of carcinoma.

No. 4—Mrs. P., age 44. Carcinoma of uterus. Died of cerebral hemorrhage. Died May 18, 1914. I saw patient in consultation on July 20, 1913, for cerebral hemorrhage. After patient got better I was asked by the husband to examine her pelvis, as Dr. R. one year before said there was a beginning carcinoma. Result of my examination reveals large immovable mass in pelvis, with foul, bloody vaginal discharge. On account of her precarious condition I advised against operation. Subsequent to this she was examined by several other surgeons, who diagnosed the case as I did—carcinoma of the uterus. December 23, 1913, I examined her. The pelvis was absolutely free from any signs of disease. Undoubtedly a cystic or inflammatory condition was mistaken for malignancy. Patient died, however, from cerebral hemorrhage.

No. 5—Mrs. K., age 51. Large carcinoma of breast. Operation May 5, 1912. Died one year later of diabetes. Tumor was as large as a goose egg, with involvement of the axillary glands. Breast was removed together with the pectoralis major and minor muscles. Axilla was radically cleaned out, it being the seat of many large glands.

No. 6—Miss B., age 33. Cyst of breast. Small piece removed for diagnosis. Operation November 15, 1908. Died one year later of carcinoma of the opposite lung. A small lump was found on this patient's breast and removed for microscopic diagnosis, which examination showed alveolar carcinoma.

No. 7, Mrs. H., age 55. Carcinoma of parametrium, which manifested itself by slight thickening. Operations, August 10, 1908, July 10, 1909, April 10, 1910. Patient died five years after first operation. First operation consisted of a Wertheim on the uterus, including posterior vaginal wall. Recurrences occurred in scar tissue and rectum, finally in pelvic peritoneum.

No. 8, Mr. W., age 60. Carcinoma of tongue at fraenum. Operation September 5, 1913. Recurred November 5, 1913. Actual cautery was used to destroy growth by Dr. O. Glands were not touched. Recurrence was rapid. I refused to operate. Patient died.

No. 9, Miss G., age 40. Multiple sarcoma in glands of neck. A tumor mass just under left breast, another tumor mass below left costal arch. Operation, April 3, 1912. No recurrence reported

at this date. This patient had been operated upon a great many times for the small masses which I have described. They would invariably recur. Microscopic diagnosis of three independent pathologists reported sarcoma of the small round cell variety. Following my operation I gave patient six-tenths of a gram of salvarsan and upon her return home she received two more injections of the same amount.

No. 10—Mrs. T., age 60. Large ovarian cyst. Operation, June 4, 1909. No recurrence. Patient remains well today. Pathological report shows a multilocular pseudo-mucoid cyst, malignant.

No. 11—Miss M., age 50. Carcinoma of cervix. Operation, December 4, 1912. Recovery uneventful. Immediately started to gain weight. Patient has remained well ever since, with no signs of recurrence. A large cauliflower mass was protruding from the cervix and had well filled the vagina. Came to the hospital after three days of profuse hemorrhage, which I thought I would be unable to control. My object in doing laparotomy was to ligate the ovarian and uterine vessels. While in the abdomen I made a complete operation, removing the pelvic fascia, peritoneum and posterior vaginal wall.

No. 12—Mrs. Q., age 39. Cyst of breast. Operation, June 8, 1914. Patient refused amputation, therefore under local anaesthetic I made as wide a sweep as possible. Patient remains well today. Tumor shows multiple cyst with an area of degeneration into adeno-carcinoma.

No. 13—Mrs. G. H., age 56. Carcinoma of ascending colon. Operation, October 13, 1914. After removal of ascending colon, which contained a large tumor, patient made an uneventful recovery. At time of operation patient was cachectic, skin yellow, weight 159 pounds. Patient's weight today is 193 pounds.

No. 14—Mrs. M., age 53. Uterine fibroid. Operation, March 26, 1915. Recovery uneventful. Patient well. Patient had been bleeding for three months. Found on operation large, thick wall multilocular ovarian cyst, adhered to everything in the pelvic cavity. Pathological report adeno-carcinoma with chronic nephritis.

Conclusion.

Carcinoma may be chronic and macroscopically may be present for years, as is shown in case one and case nine. Apparently inoperable cases may be operated with absolute success.

EARLY DIAGNOSIS OF SURGICAL DISEASES.

By C. P. Fox, M.D.,
Greeneville, Tenn.

The purpose of this paper is to call attention to minor surgical ailments which, while many times unrecognized, are too often neglected when recognized. It shall, therefore, be the object of this paper to call the attention of the general practitioner to some of these minor ailments and to emphasize the importance of their earlier recognition and treatment in order that the more serious consequences and complications that so often follow their neglect may be avoided.

Naturally, the first that we would be expected to mention in importance would be those conditions which lead to cancer. While these are the first I have in mind and the good results that follow their early treatment where cancer would have developed, they are by no means the only cases to be considered worthy of emphasis.

The vast majority of the more serious conditions which we meet and which bring the afflicted to face a grave position, and sometimes a fatal one, began with a condition, which, if it could have been relieved immediately, would have been cured with minor surgical risk. It is almost an axiom that the gravest cases that the surgeon is called upon to treat have reached this grave condition on account of failure to recognize the surgical nature of the trouble or neglect to properly treat the cause surgically.

After a quarter of a century of surgical practice in the country, I have so frequently and constantly seen that failure on the part of the family doctor to recognize these minor surgical conditions or to emphasize their importance when they have been recognized, has so often led to dire surgical sequences, that, not in the spirit of criticism, but appealing in the interest of humanity, I hope to make a plea strong enough that every man within the range of my voice may, in the interest of humanity, make more careful examinations and learn earlier to recognize and treat these simple surgical conditions, and thereby save

many lives which are now lost.

As intimated above, probably the most important class of cases are those neglected sores, growths and scars, which during their pre-cancer stage are so amenable to treatment by minor surgical procedure, but when neglected to the point that they can, without difficulty, be recognized as cancer without the use of the microscope and by clinical symptoms alone, they have then reached a stage of malignancy that, whether operated upon or not, the life of the patient is sacrificed.

It would be impossible to here mention all the conditions that may lead to cancer, but they may be classified as follows:

Tumor of the Breast.—W. L. Rodman says "that any woman who has a tumor of the breast has 90 chances out of 100 to die with cancer if not operated on." Every surgeon of experience will recall how frequently these cases of cancer of the breast will give a history of a small tumor which has existed for years without symptoms and which has given them no concern.

It is rather the exception than the rule that cancer develops primarily as cancer, but in the majority of cases has its beginning in an old scar, from a suppurating mastitis or a cake that has remained after a laceration or from a fibroma or from some other form of non-malignant tumor of the breast.

The frequency of such a history should impress the doctor with the fact that all breast tumors are surgical from the beginning and should be removed in their pre-cancer stage, since when a tumor can be diagnosed clinically as cancer it is too late for cure even by the most radical operation. What applies to tumors of the breast also applies to moles, warts, fibromas, and epithelial growths of the skin, ulcers, and, in fact, any chronic sore with indurated edges which is subject to irritation.

Ulcers of the tongue, eyelids, lips, rectum, prepuce, cervix, labia or vagina which do not yield promptly to treatment should be regarded with suspicion and should be subject to prompt and radical excision. In many instances the operation will be one of minor importance and can be performed under local anaesthesia. However, if allowed to reach the

cancer stage, the most radical operation will prove ineffective.

Cancers of the stomach, liver, lungs and intestines, being more difficult to recognize and less amenable to surgical treatment, are more likely to have developed insidiously and are more likely to be overlooked.

Gastric ulcer, being more frequently the forerunner of cancer of the stomach, should be recognized and treated medically, and if not successful, treated surgically before cancer develops.

Gall stone disease is one of the frequent causes of cancer of the liver and is always amenable to surgical treatment. Hence the prevention of cancer of the liver often depends upon the recognition and treatment of gall bladder disease.

The most frequent of all forms of internal cancer is cancer of the womb. When its symptoms have developed and the diagnosis has been made clinically, a radical cure is usually impossible. But in the vast majority of these cases there is a pre-cancer stage which may be recognized in a laceration or erosion of the cervix or walls of the uterus, which may be treated by a minor surgical operation and cancer prevented.

Too often the fault lies in the failure of the patient to consult the physician on account of modesty or fear of operation. But no less often it is the fault of the doctor in his failure to make proper examinations and to warn the patient of the dangers which lurk under the mask of a concealed sore which, if exposed to her sight, would frighten her into hysterics.

How often has she come to you complaining of leucorrhoea and indefinite pelvic discomfort, irregular menses or metorrhagia, and you have given it only passing thought.

How often have you prescribed for such a patient a vaginal douche, a suppository or a Macaijh wafer, or perchance "Orange Blossom" or some other quack remedy without examination? Have you never had such a patient to turn up a few years later with a fully developed cancer that has passed the stage of surgical relief? If she has not come back to you, she has probably been forced by hemorrhage or offensive discharge to consult some other doctor when it is too late for re-

lief. If she had been told that these symptoms were the signals of danger, and how often they mean a sore that later will end in cancer and death, she would have submitted to an examination and have proper treatment instituted and her life saved by a slight cauterization, a simple trachelorrhaphy, an amputation of the cervix or some minor surgical procedure. If you failed to make proper examination or give proper advice, you are morally responsible for her death.

Every true doctor must recognize that failure to use every means at his command to make proper diagnosis and give timely advice to prevent or cure disease, places the patient's death on his shoulders.

The doctor is not responsible beyond his ability to know, but he is responsible for failure to use all available means to make proper diagnosis and advise the proper treatment.

A willingness to undertake the treatment of a case which has not thoughtfully and conscientiously investigated and for which he is not equipped, is nothing short of criminal. He may be excused for an honest mistake, but he cannot be excused for criminal neglect.

What applies in the above remarks to the recognition of conditions that lead to malignancy applies also to many other conditions that the surgeon has to treat which reach him too often when irremediable damage has been done and the patient's life has been sacrificed.

Among the first of those I would mention is appendicitis. Appendicitis is definitely and invariably a surgical disease and should be so recognized by every doctor. The day of medical treatment of appendicitis has passed. It has been positively proven that surgery is the only means of cure and that it is the only safe method of treating appendicitis admits of no argument. No well informed doctor will claim any longer that he can cure appendicitis in any other way or that he can in any given case prognosticate the results of treatment without operation. If he will compare the results of those treated medically or without operation with those treated surgically he will be convinced. In several hundred cases operated upon within the past three years in all stages and conditions, many with free pus in the abdomen and many with

beginning peritonitis, we have not lost a case. We regret to think of the number of cases that we lost before we came to recognize appendicitis as definitely and invariably a surgical condition.

I am glad to say that most of the physicians of my acquaintance no longer regard appendicitis as any other than a surgical disease and advise operation, but I regret to say that they do often delay operation until accidents happen, seriously endangering the patient's life or until suppuration has taken place and drainage becomes necessary, rendering the patient liable to complications and sequela which never follow a clean case.

If I were asked when is the time to operate in appendicitis, I would invariably say, "As soon as the diagnosis is made."

If I had time and space I would like to report a number of cases in which I have opened the abdomen within twelve hours after the beginning of the symptoms and have found the appendix full of pus. I could also report a number of cases operated upon within twenty-four hours of the beginning of the symptoms in which the appendix was gangrenous and there was free pus in the abdominal cavity. I have in my pathologic collection a number of such appendices removed within twenty-four hours of the beginning of the attack.

There is no clinical symptom that can guide you in a prognosis up to the time of rupture. We have had a number of cases which practically no elevation of temperature, probably less than 100 degrees, and a pulse of from 70 to 80, in whom we have found an appendix filled with pus and in danger of imminent rupture. The severity of pain and muscular or abdominal rigidity are more reliable indices to the condition of the appendix, but even these are not infallible. I have not time to discuss fully the diagnosis of appendicitis further than to say that acute abdominal pain with definite tenderness over the appendix is usually sufficient to make a diagnosis. My appeal to you is to make the diagnosis at the earliest moment possible, and when made, operate or advise operation immediately for the safety of your patient.

What we have said with reference to appendicitis applies perhaps not equally, but in a sense to many other acute surgical conditions, such as acute diverticulitis, intussusception, volvulus, strangulated hernia, acute infection of the gall bladder, empyema of the thorax, mastoiditis and frontal sinusitis. Early operation in all these conditions not only conserves life and function, but often prevents chronic invalidism.

There are many other conditions in which we might emphasize the importance of early recognition of the necessity for an early operation and in which we often find a delayed diagnosis leads to most serious sequences. Prominent among these we would mention hip-joint disease, which is so often treated for rheumatism until function is destroyed. Also spondylitis tuberculosis or vertebral caries, which is often not diagnosed until a psoas abscess appears on the surface—too late to prevent deformity or cure the disease.

Of no less importance is the early diagnosis of septic arthritis, epiphysitis, osteomyelitis, which are so often treated with poultices, plasters and blisters until function has been destroyed.

While writing the above paragraph I received a copy of Murphy's Clinics, in which the first chapter is devoted to the subject of the early diagnosis of acute osteomyelitis, and he gives a number of illustrative cases in which function has been destroyed and serious consequences have followed because of failure to make a prompt diagnosis. Among the cases illustrated is one of a doctor's son treated with salicylates until the boy was crippled for life.

Before closing, I might mention the importance of early diagnosis of abdominal tumors, myomas, fibromas of the uterus, cysts and adenomas of the ovaries, various tumors of the kidneys, calculus of the kidneys, ureters and bladder; prostatic disease, such as tumors and hypertrophies.

The early recognition of surgical conditions is always conservative from an economic standpoint in so much as it saves the patient time and expense—conservative in the saving of function which results from destructive lesions as well as saving the patient

from the dangers which result from radical operations under conditions of lowered vitality.

It is, therefore, clearly the duty of every doctor to learn to diagnose these conditions and advise the patient of the surgical nature of his trouble, in order that he may consider the vital interest of his patient.

REMOVAL OF SUPERFICIAL AND PENETRATING BODIES FROM THE EYEBALL AND TREATMENT.*

By Dr. J. T. Herron,
Jackson, Tenn.

From time immemorial injuries of the ball from foreign bodies have given ophthalmologists much thought and consideration, and especially in this modern age, when there are so many different ways of wounding the eye.

Many who are not skilled in this line of work cannot fully apprehend the danger signals of wounds on this, the most important organ of the body. Let us first consider wounds of the cornea, by far the most important structure of the ball. Sometimes the least wound from a foreign body will give considerable trouble; for instance, a locomotive engineer came to me with a piece of rust left in his eye after the removal of a piece of steel. I made everything as thoroughly aseptic as possible. I used 1-5,000 bichloride and hot boric acid solution. I always use my cocaine with sterilized water, the same as my instruments. I removed the rust. I applied iodoform in salve, and bandaged the eye. On the following morning I found an ulcer which kept him from duty for two weeks. Often the rust from a piece of steel is not detected until some hours after removing the steel. The after treatment of these cases should be carefully done, because the corneal wound has been twice disturbed, and we are more liable to have an ulcer or an opacity.

The local surgeon should know where to begin and stop for his patient's safety. Many

*Read at meeting of West Tennessee Medical and Surgical Association, May 1, 1915.

of you who are remote from the specialist come in contact with wounds of the cornea, and proper advice and skilled treatment of this critical time may mean much to the future welfare and happiness of your patient.

Wounds of the cornea are as varied almost as the sands of the seashore. The most common accidents are the penetration of foreign bodies in the superficial layers of the cornea, such as small particles of iron, steel, cinders, etc. A foreign body may only injure the epithelium or it may penetrate deeply into the cornea.

The danger of such accident does not depend so much upon the depth to which it penetrates, but mainly on the condition of the foreign body. If aseptic, not so much danger will result other than the opacity of that part of the cornea, if the penetration has been deep.

If the foreign body is septic, we are liable to have an ulceration of the cornea, with all its resulting evils, such as iritis, perforation of the cornea, or panophthalmitis. Such little stress is placed upon the treatment of many wounds of the cornea that the rule of asepsis is not carried out.

I will say at the outset I believe every wound of the cornea, it matters not how small, should be treated aseptically and with the greatest care. I absolutely refuse to remove the least foreign body imbedded in the cornea unless the patient submit to wearing a bandage.

We next come to the more serious phase of this subject, and that is perforation of the cornea made by any foreign body, whether it be asptic or not. Deeper wounds of the cornea are usually incised or lacerated. Lacerated wounds are very liable to have a dense opacity, and are, therefore, very serious as to vision.

"Corneal wounds are particularly dangerous under two circumstances—that is, when they are infected and when they perforate the cornea. In the former case a purulent keratitis develops which may give rise to extensive destruction of the cornea."

In the latter case prolapse of the iris occurs if the wound is large enough. The iris or the lens may be injured at the time infec-

tion takes place, ending in the loss of the eye. These wounds demand great care to prevent infection. We thoroughly cleanse the eye with a 1-5,000 bichloride solution.

If a perforating wound of the cornea, our patient should be kept in bed. If the iris is prolapsed from a recent wound, it should be so excised as not to leave any part in the lips of the wound.

The following cases will show the importance of this statement. As, for example: A man, age 38, came to me several years ago with this history: While cutting stove wood a piece flew up and wounded his cornea, making a perforation nearly across the horizontal meridian. The aqueous escaped, the iris prolapsed into the wound and fastened. The anterior chamber was so shallow I could not replace the iris. I put him to bed, dressed it aseptically. The wound healed without ulceration. Some vision remained. I kept him under watch and warned him as to his danger, as the iris was incarcerated in the wound. Four months after the accident his vision began to give way in the good eye, until he had lost about two-thirds.

There was never a time when I could advise an enucleation of the injured eye, as he could count fingers in the outer and inner fields two or three feet from him. I put him on heroic treatment consisting of purgative, potash, iodine, bichloride, etc. After some weeks his vision began to improve, and with the exception of one or two relapses he made a good recovery. About the time I was treating the above case another came, a man aged 40. While driving a wagon a small twig on a limb struck him in the sclero-corneal junction, perforating the anterior chamber and also the capsule of the lens. There was a prolapsed iris. He did not come for several days after the accident. I removed the prolapsed iris and some of the swollen lens, which had been giving him great pain. There was no vision. Knowing the danger, I advised an enucleation, which was refused. The pain ceased, the wound healed, I dismissed him with instructions to be on the lookout, and if any pain developed in his injured eye or any trouble with the other eye, to come at once. About four months from date of injury his

good eye began to trouble him. He did not return to me, but was advised to seek another. He went hopelessly blind in a short time. I believe every blind eye that is the least dangerous should be removed at once.

If the prolapse has been ten days, and there is an exudation, then we should not attempt to replace the iris, but use atropin if a central perforation; eserine if not, with a pressure bandage.

If a piece of steel has penetrated the cornea, lens, etc., the case demands great care, and only one instrument should be considered in removing it, and that is the magnet.

This paper was written because of the following cases which prove the value of this wonderful instrument. A few months ago I was called in consultation with Dr. Dancy to see an old man, age 76. About 6 a. m. he was striking a wire fence to separate same from a post, a piece of steel about the size of a small pin head passed through the center of the cornea, lens and back into the vitreous, making a traumatic cataract. I saw him about three or four hours after that. On account of opacity of the lens, the fundus could not be seen. We placed the tip of a giant magnet just opposite the wound, thinking that would be the most favorable place for its return. We did not succeed. The tip of the magnet was then on a level with the wound in the cornea, but external. We heard a click of the steel against the magnet, but in some accountable way it did not adhere to it. On examination we found the iris was torn and bleeding as it made its exit. The iris was not touched as it entered the fundus. It passed out of the wound entrance. He made a nice recovery; otherwise he would have lost the ball.

Case No. 2—March, 1914, a boilermaker in the I. C. shops was struck in the left eye halfway between the sclero-corneal junction and the inner canthus with a large piece of steel. It perforated the sclerotic and extended into the vitreous. It could not be picked up with forceps for fear of dropping inside the ball. I placed the large tip of my giant magnet just opposite the steel and it jumped to the magnet. When a foreign body enters the vitreous, the risk becomes at once very great.

This patient returned to work in a week from the time of the accident.

Case 3—A young man, age 25, was struck in the eye with a small scale of steel while repairing a bicycle. It entered the cornea and hung in the wound in the anterior chamber. This case was seen by Dr. Dancy and myself three days after the accident. I applied the tip of the magnet near the entrance of steel, hoping the wound had not healed sufficiently to prevent it from returning through the same wound. We could not tell positively that it was steel until the magnet caused a quivering of the steel, which caused it to turn loose and drop into the lower part of the anterior chamber. The steel would rise up to meet the magnet. It was very late in the afternoon, and we requested him to meet us on the following day, at which time the anterior chamber would be opened and the steel removed, by inserting the tip of the magnet in or near the entrance of the incision. He failed to meet us, and I never heard what was done. A patient must give his consent before I open the ball, as the operation is not entirely free from danger.

Case 4—A child, age 3, the 13th of last month was brought to me by Dr. Stenson. He went into his father's blacksmith shop and picked up the hammer used in driving horseshoe nails. He commenced to hammer on the anvil, a piece of steel about one-fourth inch long and 1-32 wide peeled off the hammer and passed through the upper lid of the left eye, entered and perforated the sclero-corneal junction just inside of the cornea, and lodged in front of the iris, a fraction to the left of the center of the pupil.

After etherizing the child, I made, with a small cataract knife, a vertical incision through the horizontal meridian, and the tip of the giant magnet removed the steel particle. In attempting to remove it with forceps the iris would have been injured and doubtless permanent damage would have resulted. This child recovered with a good eye.

Since reading the above paper at our last meeting, and having failed to have the same published I have decided to continue this paper and report a few cases of punctured

wounds of the sclerotic and sclero-corneal junction which have been very interesting to me.

Dr. Albert E. Bulson of Fort Wayne, Ind., published a very able paper in the February number of the *Ophthalmic Record* on the "Conservative Treatment of Penetrating Wounds of the Eye Ball." This part of my paper was written from a statement made by him as follows: "Scleral stitches are not only difficult to place in the edge of the punctured wound, but are unnecessary, if the conjunctiva is slid over the wound and carefully stitched. Furthermore, the conjunctival flap has a tendency to prevent secondary infections which are a prolific cause of mischief in trauma cases."

I beg to differ with him in the statement that it is unnecessary to stitch punctured wounds of the sclera by reporting a few cases of this nature.

Cases 1—A few months ago a child, 8 years of age, was brought to me with the following history: After eating supper the parents lingered around the table reading the evening paper. The child took the catsup bottle and attempted to remove the cork with a carving fork. The prongs slipped off the cork and one penetrated the anterior chamber in the central part of the cornea. The other prong punctured the sclerotic half way between the cornea and inner canthus. On the following day the family physician was called and advised them to go to a specialist. They did not do so until the end of the third or fourth day, at which time I found that the cornea had been penetrated near the center. The scleral puncture had healed and little attention was given it. The corneal wound showed no infection. In a day or two the ball began to pain the child. Pus formed in the vitreous and burst through the opening made in the sclera. The infection was so great I advised a removal at once, but the parents declined.

The ball continued to contract. I advised them of the danger of sympathetic inflammation. All went well until about the end of the third month. The sympathizing eye became involved to an alarming extent. I removed the contracted ball. The good eye be-

gan to improve and up to this time has remained so.

The question might be asked, why was infection on one prong of this fork and not on both? The pus was never seen in the anterior chamber, neither the lens nor its capsule was punctured. I am inclined to believe that eye could have been saved if seen in time by using 1-3,000 solution bichloride, then touching the edges of the wound with iodine and then taking a stitch in the scleral wound. To illustrate the truth of this statement, I will report another case.

Charlie C., age 14, came to me about three months ago with the following history: His father, an engineer, just before leaving for his train, found his kitchen stove door needed some repairs. He was tightening a nut on the door when Charlie, anxious to see it, stuck his face just opposite, when the large railroad file, round at the end, slipped off the nut and punctured his right ball half way between the sclero-corneal junction and inner canthus. I saw him one-half hour after the accident. A small bead of vitreous protruded. The anterior chamber was full of blood; vision nil. After using hot solution of boric acid and bichloride, I used a fine suture to bring together the scleral wound. I then dressed the wound with iodoform salve and applied a bandage. This dressing was repeated each day. On the third day I found a sac of virulent pus over the wound. I remarked to his father and nurse, "If this infection is in the vitreous the eye will be lost." I found the wound tight and fast with the stitches. With fear I continued the treatment, adding a strong solution argyrol. The pus soon subsided. There was no pain, which is very characteristic when the vitreous is infected. Vision soon began to return until now it is 20-20 fairly well. I gave him almost from the beginning 25 drops of the syrup iodine of iron three times a day, which seemed to gradually clear up the vitreous.

I am fully convinced this eye would have been lost as the one above had the wound not been stitched. I do not believe merely stitching the conjunctiva is sufficient. I am also a strong advocate of the tincture of iodine applied locally to every punctured

wound of the ball. These cases demand extreme care to prevent infection.

Case 3—A brother of Charley's, age 17. Five weeks ago while cutting a bundle of newspapers—cutting to him—the point of the knife penetrated the eyeball at the edge of the sclero-corneal junction, wounding the iris on that side; also the lens, and continued just above the horizontal meridian, and made its exit near the outer edge of the cornea on the opposite side, making a wound nearly entirely across the cornea.

Realizing the gravity of this case, I put him in the infirmary for two weeks in bed. I used local treatment as in his brother's case. I did not keep his brother in bed as this one. He did splendidly in every way, the cornea healed nicely except at the sclero-corneal margin, which had a tendency to slough. I used four grains solution of atropine to keep the pupil dilated, and at the end of two weeks I let him go home with the instructions to stay in bed for another week. At the end of that week I let him get up, but he was to remain in the room. He ventured out to a neighbor's, and on his return he had an attack of iritis. I put him in bed and kept him there for another week, alternating every four hours with hot applications, atropine and dionin, and also gave purgative, etc. All symptoms have subsided and with care I predict a good recovery. If he should ever lose the good eye he can use this one to a fair advantage.

Case 4—Child, 4 years old, was brought to me a few months ago by Dr. S. from a neighboring town. This case was nearly similar to the above.

The child was using a pocketknife and the blade went through the sclero-corneal junction, wounding the iris, lens and penetrating the vitreous, making a large, gaping wound. The lens and iris had bulged forward. The vitreous was escaping. Vision nil. I advised a removal at once, which was urged by Dr. S., but was refused by the parents.

I refused to prescribe for the child. I also stated to the parents if they did not have the eye removed they would live to regret it.

They took the child home. About four months from the date of injury the child went

totally blind from sympathetic inflammation.

In this case I based my prognosis on the severity of the injury, also entire cut through the sclero-corneal junction, or the danger region of the eye.

We cannot be too positive in our prognosis if the cut is, as in this case, through the danger zone. I would much prefer taking my chances in getting safely through the danger zone around the coast of Great Britain, dodging a German submarine, than risk my good eye, in such a case as this or any other case if the cut extends through the danger zone. These parents are now condemning themselves, and will do so until death.

These cases I have reported are only a few among thousands that go blind yearly from such injuries. I am glad to see the family physicians begin to realize the gravity of these cases. Two weeks ago I removed an eye from a young man 17 years old, sent me by his family physician. This patient had one eye stuck with a smooth wire passing through the sclero-corneal junction, damaging the ball so much that it soon contracted to one-half the size and remained rather quiet nearly ten years before the good eye began to sympathize.

I believe he would have gone blind had it not been removed. Every muscle and tissue surrounding the ball was inflamed and adhered to the ball, which makes it hazardous to let it remain.

Candidates for admission to the grade of Assistant Surgeon in the U. S. Public Health Service will be examined at the Bureau in Washington and at several of the Marine Hospitals throughout the country on January 24, 1916. Candidates must be not less than 23 and not more than 32 years of age, not less than 5 feet, 4 inches, nor more than 6 feet, two inches in height, free from any ailment which would disqualify them for service in any climate, graduates of reputable medical schools, and with established reputations for professional and personal integrity. Full information may be had by writing to the Surgeon General, Public Health Service, Washington.

THE JOURNAL

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TENNESSEE STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Tennessee

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EDITORIALS**ONE YEAR OF MEDICAL DEFENSE FOR MEMEBRS.**

Dr. S. R. Miller, Chairman of the Committee on Medical Defense, reports that 691 members paid the medical defense assessment of one dollar during the year. Only one suit has been brought against members who have paid this assessment. This suit was brought against a physician and a druggist jointly and was compromised at the instance of the druggist. Two suits have been declined by the Committee—one because the member against whom suit was brought had not paid his assessment until some time after the alleged malpractice was committed, and another because the suit was not in the nature of a malpractice cause. Of course, the Committee will have to defend any suits which may be brought against members who have paid for medical defense for alleged malpractice said to have been committed at any time up to the end of the year 1915.

The expenditures of the Committee on Medical Defense up to December 16, 1915, were about \$400. The initial expense incurred in perfecting the plans of the Committee and in securing necessary equipment for keeping records is included in this amount and much of this, perhaps, is a final expenditure and will not be necessary in the future.

It was the sense of the House of Delegates in which the medical defense scheme was finally voted upon that every member of the Association should be required to pay the yearly assessment of one dollar. As will be seen from the fact that less than half the members paid for 1915, a strict enforcement of this requirement would have reduced our membership to a number altogether insuffi-

cient to carry on the usual activities of the Association. A very few of the component societies have reported all members as having paid the defense fee and in some county societies none have paid. Those who are familiar with the facts know that real protection has been given to the whole medical profession of the state through the mere adoption by the society of the plan of medical defense for members. The one argument and the only argument we have heard offered by any who have opposed the plan has been that it was a scheme whereby city surgeons could have protection paid for by country doctors. This argument is not valid for the simple reason that there is no such desire upon the part of city surgeons, and for the further reason, as we have repeatedly pointed out, that there have in reality been more suits brought against country doctors in the last few years than have been brought against all the doctors in all the cities. As a matter of fact, there is no protection that can be had as cheaply as that which is offered its members by the Tennessee State Medical Association, and there is no reason why every member should not take advantage of the offer of medical defense, unless it be that individuals simply prefer to have any suit which may be brought against them handled by their own private attorneys without any aid from the Association or any one else.

If all doctors in Tennessee can ever be brought to realize that the interest of the individual doctor is the common interest of all the doctors in the state, and that the common interest is identical with what is best for the individual, then will Tennessee medicine begin to go rapidly forward in all her enterprises and Tennessee doctors will serve better and be better served in their every-day work and lives. This matter of medical defense for members is one in which everybody should be actively interested and in which the cordial support of everybody should be given. Let us hope that all County Secretaries will call the attention of the members of their respective societies to the one dollar medical defense assessment and that they will urge that it be paid along with the regular membership dues.

PREPAREDNESS.

The preparedness that most concerns the medical profession of Tennessee is that preparedness which will fit them to do their full duty in the every-day practice of medicine. This kind of preparedness will make them capable of rendering proper service to the sick in times of peace and will fit them for efficient work in the field if war should come. The man who prepares himself for intelligent service to his private patients along the lines of modern scientific medicine is the same man who will best serve the wounded on the firing line and who will best direct the application of sanitary measures for the protection of the health of military camps.

One of the most gratifying signs of the times in Tennessee is to be found in the fact that so many of our doctors are taking advantage of the facilities offered in the medical and surgical centers for preparing themselves to rightly apply scientific methods which have been proved by the masters. We are hearing constantly of men from this Tennessee city and from that Tennessee town, as well as of men from strictly rural locations, who have gone to some great clinic for a month's or for two or three months' work, or to a great hospital for a year's service in the wards. We know a number of men who practice in Tennessee towns who give from one-twelfth to one-sixth of their time each year to the work of preparing themselves for better service to their patients and their communities. And they are the fellows, gentle reader, who sent our old friend "Doc" to the solitude of Coon Hollow.

More of our men could go to Chicago, Cleveland, Rochester, New York and Boston for observation and study if they would, but enough of them are showing their earnest progressiveness to insure wonderful improvement in Tennessee medicine. There is a class, however, who cannot go to these far away centers, no matter how anxious and willing they may be for better preparation. If the possibilities in Memphis and Nashville, the seats of our two medical schools, could be developed, this class could reap benefits that are now beyond their grasp, and, in the natural course of events, it would finally be that the class

now more fortunately situated would not be compelled to go so far afield for advanced work.

There are difficulties—big ones—in the way of building up serviceable teaching clinics in Tennessee. Lack of money is one of them, and one that will be hard to overcome, but we believe it can be done if everybody concerned will determine that it shall be done, and now is the time to start at doing it.

ANOTHER FAKE NAILED.

According to information received by the Journal, the Nashville Medicine Company, makers and purveyors of that most widely advertised nostrum, "Lung Vita," was compelled to admit charges of false and fraudulent labeling at a hearing before the U. S. Commissioner and to consent that judgment be entered for misbranding. After four days had been consumed in taking depositions of witnesses introduced by the Nashville Medicine Company in defense of their preparation, an agreement was reached whereby the Lung Vita crowd was to be allowed to pay the costs and consent to judgment being entered. And so another fake has been nailed. It is a pity that the Government did not press their suit and so make the statements brought before the Commissioner who conducted the hearing a matter of record.

We are reliably informed that the vital statistics record of the State Board of Health of Tennessee revealed the very interesting fact that several of those whose flamingly favorable "testimonials" to the virtue of Lung Vita as a cure for consumption were quiet in death and gone to that land from which no patent medicine boosts can ever be delivered.

THE AMERICAN COLLEGE OF SURGEONS.

The following statement has been issued by the American College of Surgeons and a request has been made that it be published in the Journal. We gladly publish it so that our readers may have first-hand information about what the College of Surgeons has in

its own mind about itself and as to what its self-expressed intentions are.

ENDOWMENT OF \$500,000 TO AMERICAN COLLEGE OF SURGEONS.

The American College of Surgeons begins the new year with an announcement that it has secured from its Fellows an endowment fund of \$500,000. This fund is to be held in perpetuity, the income only to be used to advance the purposes of the College. By this means lasting progress toward the purposes of the College is assured.

The College, which is not a teaching institution, but rather a society or a college in the original sense, now lists about 3,400 Fellows in Canada and in the United States. Without precedent for swiftness of development it stands today a powerful factor both in the art and in the economics of surgery.

Primarily the College is concerned with the training of surgeons. But the significant fact in connection with the endowment just secured is that it has come from the surgeons themselves, inspired by a motive for better service to the patient. Ideals in the profession of medicine are living things. Probably no more convincing proof of this fact exists than the sacrifice which the surgeons of this continent have made willingly in order to raise this fund.

To begin with, these ideals are to find concrete expression along the following lines of activity:

1. Since the whole problem of the training of specialists for the practice of surgery is the primary purpose of the College, the Regents propose at an early date to present a clear conception of the College to the undergraduate medical students of this continent. The Regents, further, will ask each senior student of this group who has in mind to specialize in general surgery or any branch of surgery to register with the College. As these students, then, serve later as internes and as surgical assistants, they will be requested to report these facts to the College. The College, in turn, will systematically seek information as to the ability and character of such men; and the information thus obtained becomes the basis of admission to Fellowship in the College. In addition to this procedure, the Regents will insist upon the proper keeping of case histories, and they will endeavor to stimulate in these men in training right ideals of medical practice. In this program they ask the active co-operation of the faculties of the medical schools and of all practitioners of medicine.

2. Inasmuch as proper training in surgery is inseparably involved with the conduct and efficiency of hospitals, the College will seek accurate data on all matters which relate to hospitals. From time to time it will publish studies upon hospital problems, the purpose being always to be

helpful to the hospitals. These publications, further, will inform recent medical graduates as to where they may seek adequate general or special training in surgery. To be concrete the College will deal with such problems as (a) the proper equipment for medical diagnosis, e. g., well equipped laboratories for chemical, pathological, and X-ray work; (b) the proper forms for case histories and the facilities for keeping these records; (c) the management and the curricula of the nurses' training schools; (d) the specialization essential in any well organized hospital.

3. The College will ask the faculties of medical schools to consider the advisability of conferring a supplementary degree of proficiency in general surgery and in the various specialties of surgery.

4. The College will issue readable monographs, educational in nature, to the press, to the general public, to hospital trustees, and to the profession of medicine upon subjects of medical procedure and the whole meaning of fitness to practice surgery.

The entire impetus of the College springs from within its own membership. Necessarily that impetus implies reform. But there is a vast difference between reform preached at men and reform innate in the hearts of men which finds expression at their own initiative. Whatever impetus the College possesses, it originates among the surgeons themselves. It is not an extraneous force or an "uplift" movement. But rather, out of the widely divergent views on many subjects among the Fellows, the aims of the College rise as those time-tried aspirations which are inherently the basis of all that is valuable in the vocation of surgery. The purposes of the College are concerned directly with matters of character and of training, with the betterment of hospitals and of the teaching facilities of medical schools, with laws which relate to medical practice and privilege, and with an unselfish protection of the public from incompetent service; in a word, they embody those ideals which have stood the test of centuries. Upon these the Fellows are united. These are the ideals which each Fellow, single-handed, has endeavored to foster, and the expression of them today through the College comes as a sort of mass-consciousness of the whole body of Fellows. The splendid fact is that the Fellows have grasped in an instant the meaning of the College by a process of fusion and they have gladly made sacrifices for its success.

As one comes into wide acquaintance with the Fellows of the College and catches some fair notion of their earnestness, he sees the future of the organization not by means of logic. There is something more subtle and potent than argument. A determined optimism carries a momentum of its own. Without a logical process it seeks concrete expression; and, more than this, it really recreates circumstances through all shifts

of weather or play of incident with a certainty not excelled by an utterly rational course. The Fellows of the College, in their widely scattered districts, fuse their consciousness of the organization with a splendid hope in their hearts to advance all that is important and valuable in the profession. This very attitude of mind is the first promise for the future of the College. It is a promise that admits of no defeat. It is a pledge of loyalty to medical patriotism which means loyalty to the public welfare exercised through intellectual sincerity and scientific accuracy. It means a safeguard to the public, for it indicates where honest and adequate surgery may be found.

DR. C. C. HOWELL.

The Journal has been advised of the death, on December 27, 1915, of Dr. C. C. Howell, a pioneer physician of McNairy County. For forty-five years Dr. Howell practiced medicine, McNairy County, and his death has removed one of the most widely known and loved physicians in West Tennessee.

BROADENING FIELDS OF SERVICE FOR OUR MEDICAL SCHOOLS.

Until within the recent past our medical schools in Tennessee have limited their work to the preparation of students for the practice of medicine and surgery—private practice. This will continue to be the first interest of our schools for a long time and is as it should be, but it is most gratifying to note that both the Vanderbilt School of Medicine and the University of Tennessee School of Medicine are beginning to assume duties of an educational nature, the performance of which distinctly stamps them as active arms of real universities.

The faculty of the University of Tennessee School of Medicine, at Memphis, has undertaken a campaign against malaria, hoping to bring the average practicing physician and the people of the section of country in which the school is located to a better understanding of the nature of this chronic-disease producer, in order that measures for its prevention may be more intelligently and more widely applied. We are not familiar with the details of the plan under which it is intended to proceed, but feel very sure that this most praiseworthy enterprise of the Memphis faculty will be productive of great benefits.

A part of the faculty of the Vanderbilt School of Medicine has begun an intensive study of pellagra as it is found in the country around Nashville, and is conducting this work in a way that will direct the attention of the public to the very great economic importance of this disease and to acquaint the people with what is known about its prevention.

The day has gone when a really good medical school may content itself with the mere teaching of medicine to a comparatively small group of personally interested students. To turn out a few doctors each year into private practice, even though these few be better equipped than any others, is not enough. Our schools of medical teaching should be, as they are, parts of universities and universities must serve as centers from which education in its broadest sense is disseminated. Doctors must be sent out by them to serve as practitioners of medicine, sanitarians must be furnished by them to direct those agencies which have been and will be created for the protection of the public health, teachers and research workers must be prepared to carry on the work of the investigation and of handing down to others scientific instruction, facilities must be afforded for keeping the doctors they have already made capable of applying advanced methods, and the people must receive from them, directly or indirectly, the necessary helpful information by which they will be enabled to overcome preventable disease.

The signs indicate that our Tennessee medical schools are awake to their duty and that they are striving to put themselves in line to assume whatever is incumbent upon them. The profession of the state has a duty to perform in this connection. It is to uphold our own schools in every possible way.

THE TROUBLE IS—

That our county societies and the medical society of the state have no definite end in view to which they are actively and persistently and intelligently working. We have lots of printed words and do lots of talking and quit at that.

Of course, we have beautifully constructed

declarations in our constitutions setting out what we are supposed to have as a purpose and defining certain lines of activity which we supposedly propose to pursue. We have committees and boards. We have a monthly periodical, such as it is. We pay dues and we pay a medical defense assessment, that is less than half of us do. We have meetings and we listen to papers and we discuss medical subjects in these meetings. We enjoy banquets and have a good time together. We have a comparative few men who give most faithful and unselfish attention to routine details as officers of our societies and members of committees.

But we have no definite constructive program for making our societies serviceable instruments whereby the declarations of our constitutions can be filled with real meaning and whereby the supposed purposes of our organizations can be definitely accomplished.

What are we going to do about it? It's time to do something.

The next annual meeting of the Tennessee State Medical Association will be held in Knoxville in April. This meeting will be attended by delegates chosen by the component county units to represent them. They are entrusted with the duty and are accorded the privilege of constructing a plan of action and of providing the machinery for its successful prosecution—~~building~~ for the future. Let's have a plan and let's carry it out. Let's set our pegs to do something, even though it be just one something. Let it be something that will compel and hold the active interest and persistent co-operation of every county society.

The columns of the Journal are open for suggestions.

A BIT OF HISTORY.

"The Medical Society of Tennessee" was incorporated by act of Legislature passed January 9, 1830, one hundred and fifty-four physicians being named in the charter.

First meeting held at Nashville, May 3, 1830; Jas. Roane, President. Second meeting at Nashville, May 2, 1831. Third meeting at Nashville, and continued to meet at Nashville until 1851, when it met at Mur-

freesboro. In 1852 and 1853 it met at Nashville.

The thirty-second annual meeting was held at Murfreesboro on April 2, 1861, with eleven present. No more meetings until April 20, 1866, when it met at Nashville, with seven present. Met 1871 at Pulaski, 1874 at Chattanooga, and 1878 at Memphis. Forty-seventh annual meeting was held in 1880 at Knoxville. There were two meetings at Nashville in 1881. Met at Memphis in 1882. Fiftieth session held at Nashville in 1883. Met 1884 at Chattanooga, 1885 at Nashville, and 1886 at Memphis.

H. P. LARIMORE.

Chattanooga.

News Notes and Comment

Our membership for 1915 was 1,443.

This is not enough, though it represents a very fair part of the total number of eligible physicians in the State.

Some of our county societies have done well during the last year. Some others have done nothing. Some have done better than ever before, even though they have always done well. Some others have done worse than ever before, even though they never did do anything.

There are some men, it seems, who won't do anything to help themselves if by any hook or crook it will in any way help anybody else for them to help themselves. This is the kind that God never will help.

Dr. Lee A. Stone, Memphis, has been made Lecturer on Medical Sociology in the University of Tennessee School of Medicine.

Dr. S. S. Marchbanks, formerly of Sparta, will locate in Chattanooga. Dr. Marchbanks has recently completed a year's work in the Skin and Cancer Hospital in New York and will limit his practice to skin diseases. Dr. Marchbanks was held in high esteem by the profession in his old home and goes to Chattanooga with the well-wishes of the White

County medical fraternity and many others who will watch his career with sincere interest.

Dr. L. D. Hill, of Sparta, who has been on service at Bellvue Hospital, New York, is temporarily acting as Ship Surgeon on the "Advance," a vessel running between New York and Panama. Dr. Hill will return to New York for further hospital work.

Dr. V. H. Coles, Nashville, is now occupying offices at 302 Sixth Ave., N.

Dr. S. E. Gaines, Sparta, has entirely recovered from a recent illness and is back at work.

Dr. B. M. Tittsworth, Secretary of the Jefferson County Medical Society, was the first to send in a 1916 report. On December 18 he forwarded a list of thirteen names for entry on the 1916 membership roll and inclosed a check for \$39 for membership dues and medical defense assessment for the whole thirteen. Dr. A. F. Richards, Secretary of the White County Society, was a close second, sending fourteen names for 1916 enrollment.

One of our county secretaries who always has his reports in early is Dr. B. F. Fyke of Robertson County. He has sent in names and dues for 1916 of thirteen active members and names of two honorary members.

Dr. W. K. Vance, Secretary of the Sullivan-Carter-Johnson County Medical Society, has reported twenty members for 1916 and has remitted dues for this number. There will be others.

A new county is coming into the fold, Coffee having recently organized. Dr. Chas. Griffith has reported the names of thirteen members. We most heartily welcome them and will make more formal mention of the new society in February.

The many friends of Dr. A. B. Cooke, for so long a worker in the front rank of organized medicine in Tennessee, will we know be glad to hear of the deserved success which

has come to him in his California home at Los Angeles. Dr. Cooke has recently received appointment as attending surgeon at the County Hospital at Los Angeles, the honor having come to him unsolicited. This is an assignment eagerly sought for by surgeons because of the most excellent service to be had in this great institution, which now accommodates 1,300 patients. A new wing is now under construction and when this is complete the capacity of the hospital will be 1,700. Dr. Cooke expects to visit Nashville in February. He will find a warm welcome.

Dr. Walter S. Clack, Rockwood, was married to Miss Elizabeth Haley on December 10, 1915. Dr. Clack is one of East Tennessee's progressive physicians with a large coterie of friends throughout the profession in the state. The Journal extends congratulations.

Dr. U. G. Jones, Coal Creek, is one of the County Secretaries who got in an early report for 1916. He starts Anderson county off well and promises more a little later on.

The hospital capacity of Chattanooga is being largely increased. At Erlanger Hospital new buildings are nearing completion, the West-Ellis Private Hospital is doubling capacity by erecting a new building, and the Newell and Newell Sanitarium's large addition is being hurried on to completion.

Dr. H. Berlin, of Chattanooga, who has been in feeble health for the past several weeks, is now able to sit up and receive company.

Dr. W. H. Cheney, of Chattanooga, who was so long in charge of the Erlanger Hospital laboratory, has discontinued his connection with that institution and opened offices at 710 Georgia Avenue. He will specialize in X-ray and laboratory work and skin diseases. Miss Francys Read took charge of Erlanger's laboratory on January 1st.

Everybody who knows Dr. L. A. Yarbrough—and nearly everybody does—knows

that it will take more than an attack of perforative appendicitis to overcome his spirit and physical strength. Dr. Yarbrough was operated on for a most virulent appendicitis on December 18 and had a stormy time for a few days. All his numerous friends in the Association will be glad to learn that he is back at home in Covington ready for whatever turns up. Dr. Yarbrough is a most valuable member of our society, and we hope he will be long spared to continue his cheerful and willing helpful activities in the organization.

The 1916 catalogue of W. B. Saunders Company, Medical Publishers, has come to the Journal. It would be hard to get together a better collection of books for a working library than can be ordered through this catalogue, which is so complete in its descriptions of the volumes offered by Saunders that it readily serves as a reference index to modern medical writings. The catalogue, we understand, will be sent upon request.

Mrs. Nora Howell, wife of Dr. J. G. Howell, died at her home in Stantonville on December 5, 1915.

Speak gently. You would, in all probability, have done pretty nearly the same thing had you been in the other fellow's place.

If the names of all the men who paid 1915 dues had been reported to the office of the State Secretary we would have a new record to report at Knoxville.

The H. K. Mulford Company has established a "Department of Sanitation and Epidemiology" under the direction of Dr. Thomas W. Jackson. Their purpose, as announced, is to aid public health authorities in studying health problems.

"Today is your savior; often crucified between two thieves—yesterday and tomorrow." We saw it in some "woman's paper," but it's the truth.

We got lost one day last week in a doctor's office, just half way between the pile of cut off bandages, bloody gauze and cotton pledgets

over the slop bucket and the mountain of newspapers, unopened medical journals, and "proprietary samples" on what is supposed to be a desk. While trying to grope our way out we found two of the doctor's patients who had become engulfed and assisted them to reach the outside world. We hope the doctor himself will lose the combination by which he has been enabled to steer safely through the accumulations of years and find his tomb in that very depository of filth which he calls his "office."

If any one of our readers desires to purchase a shotgun which has two barrels and two very upstanding hammers, we can refer him to a distinguished young Nashville physician who has this very implement for sale. A gun just like it can be bought most anywhere for \$3.13, but this one will cost you \$15 because it has been blessed with many blessings since it was hocked for the latter sum.

Society Proceedings

RUTHERFORD COUNTY.

At a regular meeting of the Rutherford County Medical Society held at Murfreesboro in December the following officers were elected for 1916: President, Dr. J. A. Scott; Vice President, Dr. J. F. Harris; Secretary-Treasurer, Dr. E. H. Jones; Delegate to Tennessee State Medical Association, Dr. E. H. Jones; Alternate, Dr. E. M. Holmes.

We are planning to have a revival of medical progress in Rutherford County in 1916, and want every eligible physician in the county to join in the effort to make our Society one of the best in the state.

E. H. JONES, Secretary.

GREENE COUNTY.

The Greene County Medical Society, considered from all angles, has just closed its most successful year's work.

On December 6th we had the last meeting of the year, with a full attendance of enthusiastic doctors. After an interesting program was finished, we elected the following officers for the year 1916: President, Dr. E. M. Bell, Greeneville, R. F. D.; Vice-President, Dr. H.

A. Simpson, Afton, R. F. D.; Secretary, Dr. M. A. Blanton, Baileyton, re-elected.

We will take up a "General Review Course" at our next meeting, January 3rd, 1916, and continue this policy throughout the year.

The subjects for discussion at our January meeting will be "Pneumonia, Lagrippe and Allied Conditions," to be led by Dr. J. B. Bell, Greeneville, R. F. D.

We are now outlining a course for the remainder of the year, which will be sent to you later.

Our meetings are every first Monday at 10 a. m.

And now for a greater Medical Society for 1916!

Yours fraternally,
M. A. BLANTON, Secretary.

WILLIAMSON COUNTY.

At the last regular meeting of the Williamson County Medical Society officers for 1916 were elected as follows: President, Dr. B. T. Nolen; Vice-President, Dr. J. O. Walker; Secretary, Dr. K. S. Howlett. A program for the next six months' work was prepared.

K. S. HOWLETT, Secretary.

CHATTANOOGA ACADEMY OF MEDICINE AND HAMILTON COUNTY MEDICAL SOCIETY.

These are our officers for 1916: Dr. G. Victor Williams, President; Dr. H. L. Fancher, Vice-President; Dr. H. P. Larimore, Secretary-Treasurer. The election was held on December 3. Dr. Y. L. Abernathy was elected on the Board of Censors to serve three years. The other members of the board are Dr. E. B. Wise, Chairman, to serve one year, and Dr. Frank Trester Smith, to serve two years.

The annual banquet of the Society will be held on the evening of January 7 at the Mountain City Club. A splendid occasion is anticipated.

The program has been arranged for only the first six months of 1916 and is now in press. Copies will be sent to you early next week. The program contains forty essay titles, also a complete "List of Members," and a complete "List of Graduate and Practical Nurses.

H. P. LARIMORE, Secretary.

GRUNDY COUNTY.

The Grundy County Medical Society breathes again—at least, it sat up and took notice at its annual meeting on the first Tuesday in December. All members were present on that date, at which time Dr. C. W. Hembree, Tracy City, was elected President; Dr. U. B. Bowden, Pelham, Vice-President, and the present incumbent was re-elected as "cussing" catcher (commonly known as Secretary) for 1916. The year 1915 left much to be desired for the Grundy County Society, but all the members seemed to show renewed interest, so let us hope that 1916 may show as much improvement as 1915 did loss.

HY LOCKHART, Secretary.

JEFFERSON COUNTY.

The Jefferson County Medical Society met in regular session at the office of Dr. B. M. Tittsworth in Jefferson County December 7. A large attendance was present. The meeting was called to order by the President and the regular order of business was proceeded with. Dr. Tarr read a paper on "Gonorrhea," and the discussion was participated in by Drs. Walker, Lequire, King, Taylor, Cooper and Brown. Dr. Roberts read a paper on "Rheumatism," which was discussed by Drs. Lequire, King, Cooper, Taylor and Roberts. This subject was continued for discussion at the next meeting.

After approval of the minutes of last meeting, the election of officers for 1916 was proceeded with and the following were chosen to serve: President, Dr. W. H. Taylor; Vice-President, Dr. G. D. Lequire; Secretary, Dr. B. M. Tittsworth (re-elected); Treasurer, Dr. G. M. Kinder (re-elected); Censor, Dr. P. A. Tinsley; Delegate to Tennessee State Medical Association, Dr. J. I. Huggins; Alternate, Dr. W. F. King.

The following essayists were chosen for the next monthly meeting, to be held at Dandridge on the first Tuesday in January: Dr. G. D. Lequire, "Influenza;" Dr. N. M. Dukes, "Rheumatism;" Dr. G. M. Kinder, subject to be announced.

B. M. TITTSWORTH, Secretary.
W. H. TAYLOR, President;

WHITE COUNTY.

The White County Medical Society in regular session in Dr. Richards' office, December 9, with the following members present: Drs. A. A. Bradly, W. J. Breeding, E. B. Clark, S. E. Gaines, D. R. Gist, P. K. Lewis, A. F. Richards, R. E. Lee Smith, and J. F. Bell.

Dr. Lee Smith delivered a special address on his experience with pituitrin in his obstetric practice, which was of general interest and elicited a good discussion in which every man gave his experience.

This being the last meeting of the year, officers were elected for 1916, as follows: President, Dr. J. F. Bell, Bon Air; Vice-President, Dr. S. E. Gaines, Sparta; Secretary, Dr. A. F. Richards, Sparta; Delegate to State Society, Dr. W. J. Breeding, Sparta; Alternate, Dr. R. E. Lee Smith, Doyle; Censor for three years, Dr. D. R. Gist, Sparta.

The society is in good condition for beginning the new year, the members are all harmonious and a general good feeling prevails. I am glad to say that all of our members are thriving and doing well—"making good"—and are not letting the banner of honorable medicine trail in the dust or be stained by immoral conduct. We feel safe in saying that no county in the State of its size has a better profession than White.

Our meetings are on the second Thursday in each month at 10 a. m. At the next meeting, January 13, the subject will be "Pneumonia," led by Dr. Gist.

A. F. RICHARDS, Secretary.

BEDFORD COUNTY.

Bedford County Medical Society met in regular session December 18, 1915, with the following members present: Drs. Morton, S. S. Moody, Patton, Dyer, Avery, G. W. Moody, Coble and Reagor, and also Rev. B. E. Hinkle. The society was opened with prayer by Rev. P. E. Hinkle. Minutes of previous meeting was read and adopted. Rev. B. E. Hinkle by request read a very interesting paper on "The Doctor as the Minister Sees Him." After which the officers of our society were elected for the year 1916. Dr. S. S. Moody was elected President; Dr. E. W. Patton, Vice-President; Dr. F. B. Reagor, Secretary and Treasurer; Dr. J. K. Freeman, Censor for

next three years, making our Board of Censors: Dr. J. K. Freeman, three years; Dr. T. R. Ray, two years, and Dr. R. E. Shelton, one year. Dr. F. B. Reagor was elected Delegate to the April meeting of State Association at Knoxville, and Dr. James L. Morton was elected Alternate Delegate. Essay Committee to be appointed by the President. No other business the meeting adjourned to January, 1916, meeting.

F. B. REAGOR, Secretary.

JOHNSON CITY AND WASHINGTON COUNTY.

Dr. Elmore Estes, acting President in the absence of the President, called the meeting to order.

Reading and approval of the minutes of last meeting.

Those present were: Drs. Long, Estes, West, Panhorst, Kennedy, Sells, H. D. Miller, Randall, Cass and Arnold.

The society met with Dr. Kennedy by invitation.

Under head of clinical cases Dr. Long reported a case of loss of vision in one eye in a young married woman, with severe pain in ball and in side of head, vision fading out in about one month, not sensitive to light. Was unable to say as to intra-ocular tension or as to pupillary action.

Differential diagnosis as to diphtheria came up for a lengthy discussion.

Question as to charges for attending contagious diseases came up for discussion. No definite action.

Dr. Arnold reported a hemorrhagic case in a lad with marked oedema. Upon the least abrasion anaemia a marked symptom. Reported that this class of cases was being thoroughly investigated in laboratory work at Johns Hopkins University. Thought that the coagula of the blood was a factor.

Dr. Long reported a case of pernicious anaemia in a child 5 years of age.

The "one telephone" proposition came up and a motion for the adoption of one phone was unanimously carried. A vote was taken, and the phone adopted was the Bristol Telephone, and it was decided that this move should go into effect upon January 1, 1915,

giving notice to companies by the 15th of December.

Election of officers was the next order of business, and the following were chosen for the year 1916: Dr. Elmore Estes, President; Dr. M. H. Panhorst, Vice-President; Dr. J. W. Cox, Secretary and Treasurer; Dr. E. T. West was re-elected a member of the Board of Censors.

The Secretary and Treasurer made his report and showed that there was a balance of \$1.50 in the treasury for the year ending December, 1915.

The society went on record to have one-day session every three months, alternating with Johnson City and Jonesboro; other monthly meetings of the society to be held as heretofore in Johnson City.

Dr. Kennedy received the thanks of the society for his courtesies extended to the society at his office. The society adjourned to meet with Dr. Estes, the new President, the first Thursday night in January, and that the society accept the invitation of Dr. J. H. Preas to meet with him the first Thursday night in February.

Essayists for the next meeting are Drs. Panhorst and Estes.

J. W. COX, Secretary.

ROBERTSON COUNTY.

The December meeting of the Robertson County Medical Society was held in Springfield Tuesday, December 21, with the following members present: Drs. Royster, Banks, Frey, Woodard, Johnson, Winters, Fyke, Moore, Shoulders, Mathews, Dye. Meeting called to order at 11 a. m. by President Royster. Minutes of November meeting read and approved.

By resolution, reporting clinical cases was dispensed with, and reading and discussing sections of the Code of Medical Ethics was substituted, and quite a discussion was brought out on the section in reference to conduct on the part of physicians in doing contract practice as it applies to making life insurance examinations.

The attention of the members present was called to a series of resolutions that were drafted and signed by all of the physicians

of Robertson County in 1906, and that the resolutions had been signed by all physicians that had moved into the county since 1906, and that these resolutions set forth that no life insurance examination would be made for less than five dollars, but the report was abroad that somebody was making them for the regular fee as established by the several companies at three dollars. Adjourned for dinner.

Reconvened at 1 p. m. Inasmuch as the Board of Health and Legislation was not appointed at the November meeting, the President appointed the following named members to constitute that board: Winters, Shoulders and Woodard. In the absence of all Directors for the day, the Secretary-Treasurer read a paper prepared by Dr. Woodruff on the topic, "Has the Operation of the Federal Anti-Narcotic Law Accomplished the Results Expected by Its Friends?" The paper was freely discussed. By resolution, Dr. C. B. Woodard was invited to read a paper at the February meeting on "Abscesses of the Gums and Pyorrhea." Drs. Reeves, Dye and Frey were appointed Directors for the January meeting. Adjourned to meet in Springfield Tuesday, January 18, 1916.

B. F. FYKE, Sec.-Treas.

RESOLUTIONS BY LOUDON COUNTY MEDICAL ASSOCIATION ON DEATH OF DR. GEORGE M. BURDETT.

At a regular meeting of the Loudon County Medical Association held December 13, 1915, the following resolutions were adopted: Be it

Resolved, That in the death of our beloved friend and brother practitioner, Dr. George M. Burdett, we as a society will sorely feel his loss and his vacant chair at our meetings will be painfully noticed. Inasmuch as he was one of our charter members and one of the oldest practitioners in the state, and one whose memory and name will be honored not only by the local medical fraternity, but by the State Medical Society and the American Medical Association, of which he was an active member, and more especially by suffering humanity, which received so many kind at-

tentions from him; he was a physician who wholly disregarded his personal pleasures and comforts, who was self-sacrificing and had as his heart's ambition a desire to relieve the sick and afflicted without regard or thought of compensation;

Dr. Burdett was nearly 78 years of age, graduated in medicine in 1861, and was a personal friend of and holding sacred the memory of Dr. Crawford W. Long, who was the first to use ether as an anaesthetic in surgery, Dr. Ephram McDowell, our first abdominal surgeon, and Dr. Lawson Tate, our first gynecologist, and while he knew well these path-finders of medicine and surgery, he was not regarded as a doctor exclusively of the old school. One of his most recent papers read before the society on the history and progress of medicine proved him to be a hard student through life, keeping himself thoroughly posted on the progressive methods of treatment. He served as one of our first presidents, following Dr. B. B. Lenoir, whose memory we still cherish. He has held many responsible positions in life. Soon after receiving his diploma he was made a surgeon in the Confederate army and was placed in charge of any army hospital. For many years he was surgeon for the Southern Railway Company. Be it further.

Resolved, That a copy of these resolutions be spread upon the records of our society, that a copy be furnished the family and that they be printed in the Lenoir City papers and the State Medical Journal.

SUMNER COUNTY.

The Sumner County Medical Society held its regular bi-monthly meeting in Gallatin the first Wednesday in January. The officers elected for the ensuing year are: Dr. T. G. Carter, President; Dr. Jno. R. Parker, Secretary and Treasurer; Dr. B. S. Galbreath, Delegate, and Dr. Homer Reese, Alternate. Dr. R. A. Barr, of Nashville, was present and read an interesting and instructive paper on "Gastric and Duodenal Ulcers," which was thoroughly enjoyed by all present.

JOHN R. PARKER, Secretary.

Book Reviews

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By Oliver S. Ormsby, M.D., Professor of Skin and Venereal Diseases in Rush Medical College, Chicago. 1,168 pages, profusely illustrated. Lea & Febiger, Publishers, Philadelphia. Cloth, \$6.00 net.

On account of recent advances in this branch, Dr. Ormsby has presented an entirely new book which includes all the modern advances in this field. With his vast experience, coupled with his most thorough review of the works of others, it may be said that he has left no stone unturned.

The reading matter is concise and attractive, and the illustrations are unusually good for any text-book. His arrangement of the chapters on anatomy, physiology, symptomatology, etiology, pathology, diagnosis, prognosis and therapeutics makes it goor for the student. In fact, many of the newer facts relative to the integument and its adjacent tissues in pathologic conditions are clearly described and make the book one of great value to the busy dermatologist.

The chapter on general pathology might be made fuller by more detail as to cells and cell changes in the various diseases that invade the skin.

The tests that are of greatest value are clearly brought out in their relation to certain diseases, as, for instance, the Wassermann reaction, the luetin test, the tuberculin tests, etc. He also gives a most impartial discussion of the value or uselessness of vaccines, and discusses autogenous serum up to our present light of knowledge.

As to the X-ray and radio-therapy he gives the very best and latest methods and views, showing the really wonderful achievements brought out by these agencies—more in this field than in any other.

His chapter on syphilis is excellent—in fact complete—from a dermatological standpoint. He also emphasizes the importance of a consideration of the ravages of this disease on the nervous and cardio-vascular systems that may go hand in hand or follow cutaneous manifestations. This the skin man should never lose sight of.

In classification, he, for the most part, adheres to the old Hebra plan. This is probably as good as could be had from our present knowledge as to etiology and pathology, although we realize that this is not yet just what we might wish, to be ideal. This classification is probably not best for the medical student, yet any other is not adequate for the dermatologist.

The author shows a most careful and conscientious effort in the review of other literature, and has included about all the diseases brought out only in recent descriptions—as, for instance, ery-

throdemic congenitale ichthyosiforme; keratodermic blennorrhagique; purpura anularis telangectoides; hereditary oedema of the legs; gangosa; grainitch, etc.

Altogether the book shows system and evidences of the most painstaking work. It is undoubtedly one of the greatest contributions ever offered to this branch, and will take no great time in finding its place at the top of the textbooks on dermatology.

HOWARD KING.

PRACTICAL CYSTOSCOPY AND THE DIAGNOSIS OF SURGICAL DISEASES OF THE KIDNEYS AND URINARY BLADDER. By Paul M. Pilcher, M.D., Consulting Surgeon to the Eastern Long Island Hospital. Second Edition, Revised and Enlarged. 504 pages, 299 illustrations. W. B. Saunders Company, Philadelphia, 1915. Cloth, \$6.00 net.

The first edition of Pilcher's work was received with delight and was promptly accorded the place it deserved as the best work of its kind. This new edition is far better than the first for the reason that it contains so much more subject matter and for the further reason that what was presented in the first edition has been revised and retouched to bring it into accord with established facts which have been developed since it was first written. A new section has been added, which deals with pyelography and is a very valuable addition to the book, notwithstanding the author's insistence that pyelography is to be resorted to only as the very last measure in making a diagnosis and to the effect that only a very few expert cystoscopists are able to use this method with safety. Braasch's radiograms are used in an appendix to the section on pyelography for the purpose of illustrating the text. All the new methods which have won distinction as valuable aids in diagnosis and treatment are given mention and their adaptability and limitations are indicated. In the consideration of the various diseases of the kidney illustrative cases are presented in detail and serve well to bring out and impress points of the text. One who reads after Pilcher can but be impressed with the fact that he is enthusiastic over his subject, without losing that most valuable attribute of the man who wants his work to stand—sane conservatism.

AMERICAN ILLUSTRATED MEDICAL DICTIONARY (DORLAND). New (8th) Edition, Revised and Enlarged. Edited by W. A. Newman Dorland, M.D. 1,135 pages, 331 illustrations. W. B. Saunders Company, Philadelphia, 1915. Flexible leather, \$4.50 net; with thumb index, \$5.00 net.

This new edition of the American Illustrated Dictionary contains more than 1,500 more terms than the last former edition of this very valuable everyday aid to the busy physician who wants to

understand the meaning of the unfamiliar words and terms which he so often comes across in the reading of scientific papers. From this dictionary, too, he is able to ascertain word equivalents for the commoner words and terms which may be used to convey various meanings. A short time since we ran across the word "fagopyrism" right in the middle of a sentence and without any guiding hint as to what sort of an animal it was intended to refer to. When we got this American Dictionary the first thing we did was to look for "fagopyrism" and we found it, and with it we found what it meant and where it came from. Just to try the Dictionary out, we looked through several late medical journals and selected words with which we were not familiar from half a dozen articles. The Dictionary had them all but one, and we are inclined to think there really is none such. More than this, we have compared this dictionary with another and we prefer this one. A good dictionary is a necessity for any doctor who reads or writes. The Journal most heartily advises you to choose the American Dictionary.

BONE-GRAFT SURGERY. By Fred H. Albee, M.D., Professor of Orthopedic Surgery, New York Post Graduate School and the University of Vermont. 417 pages, with 332 illustrations. W. B. Saunders Company, Philadelphia, 1915. Cloth, \$6.00 net.

The man who has "delivered the goods" is the man who gets the respectful attention of his fellow-men, equals and inferiors. Albee has done that thing and is recognized everywhere as the leader of thought and the most eminent of operators in the particular field of surgery to which the book under review is devoted. The novice under whose observation this volume comes will be startled by the revelation it makes of what is possible in the treatment of diseased and injured bony parts; the surgeon who has done some of the simpler bone grafting procedures will be impressed that his duty is to prepare himself for further application of such surgery; the master surgeon must concede that Albee has rendered a great service in so well presenting his subject and will, in all fairness, accredit him due honor for his most valuable work. The book is a most complete treatise on bone-graft surgery—from fundamental principles to the last word in what is known about this work. The illustrations are well chosen and well executed.

THE CLINICS OF JOHN B. MURPHY. Vol. IV, Number 6, December, 1915. W. B. Saunders Company, Philadelphia. \$8.00 per year.

This is the index number of the Clinics for 1915. A wide range of subjects covered in Murphy's own way will be found to interest any who are concerned with the application of modern surgical procedures. In three of the clinics the Murphy method of bloodless reduction of hip luxation is fully described and

illustrated. A most interesting and instructive clinic is that dealing with Osteosarcoma of Scapula—Total Excision of Scapula. The accompanying illustrations show the original deformity, pre-operative and post-operative skiagrams, and a remarkably gratifying result is evidenced by the extent of voluntary flexion of the arm two months after operation. Extensive Contractures of Hands—Excision of Cicatricial Tissue—Grafting by Pedicled Abdominal Flap is the subject of another clinic, with illustrations showing steps in operations.

POISONOUS FLY PAPERS.

A year ago, in discussing this subject editorially, we gave a partial report of the cases of arsenical poisoning of children from accidentally consuming the contents of fly destroying contrivances during the summer of 1914. It was gratifying to note the number of medical journals that reprinted our editorial or commented upon the subject. The discussion was evidently a timely one.

For the summer of 1915 we have been able to secure reports of the following cases:

Month	No.	Fatal	Recovery Indicated	Recovery Doubtful
May	1	1		
June	2			2
July	5	2	2	1
August	14	5	8	1
—	—	—	—	—
Totals	22	8	10	4

These cases were reported by the daily press as occurring in the following states: Georgia, 1; Illinois, 6; Indiana, 2; Iowa, 2; Massachusetts, 2; Michigan, 2; Missouri, 1; Nebraska, 1; New York, 1; Oklahoma, 1; Ohio, 1; Pennsylvania, 2; a total of twenty-two cases. This report must necessarily be considered as very incomplete and but an indication of the possible extent of a wholly preventable danger.

We again point out the fact that the symptoms of arsenical poisoning are very similar to those of cholera infantum and that undoubtedly a number of cases of cholera infantum that occurred were really cases of arsenical poisoning, and death if occurring, was attributed to the fact. The cases reported were of children ranging in age from 1 to 6 years. These little patients are not old enough to tell what they have taken when questioned as to their illness and unless they are seen consuming the fly poison the actual cause of their sickness or death is overlooked and the fatality ascribed

to cholera infantum or to some other similar causes and the error in diagnosis goes undetected.

We repeat, arsenical fly destroying devices are dangerous and should be abolished. Health officials should become aroused to prevent further loss of life from their source.

Our Michigan Legislature, this last session, passed a law regulating the sale of poisonous fly papers. Similar enactments should be secured and endorsed in every state in the Union.—From the Journal of the Michigan State Medical Society.

PUBLIC HEALTH REPORT OF THE SECRETARY OF THE TREASURY.

The annual report of the Secretary of the Treasury as it relates to the Public Health Service contains numerous recommendations bearing on the functions of that organization and evidences the great interest of this department in the extension and expansion of the governmental agencies for the protection of the public health.

In the development of general public health work, according to the Secretary, there is great need of additional medical officers. The number of requests for advice and assistance in health problems received from states and municipalities during the past year has far exceeded that in any similar period in the history of the Service, but the limited number of officers available for the work has prevented in many instances compliance with these requests.

The field investigations, the Secretary states, have served as a stimulus to state and local health agencies, and every effort should therefore be made to encourage and turn to practical account the interest in health matters awakened in the general public. For this reason an increase in the appropriation for field work is requested.

An additional building for the Hygienic Laboratory is urgently needed. The work of this institution has been greatly extended, particularly as it relates to the examination of viruses, serums and analogous products, a vast market for which has been recently created abroad. The safeguarding of these therapeutic agents requires great accuracy and precision and overcrowding is a serious handicap. In order that the public health may be better pro-

ected, an annual appropriation of \$25,000 is recommended to be expended in carrying out the provisions of the law relating to the examination of these products.

The United States is the only government of importance which does not provide for the care and isolation of lepers. The establishment of a national leprosarium where the numerous lepers, most of whom are native born Americans, may be properly segregated and treated, thereby eliminating a menace to the health of others, is urged.

The further recommendations of the Secretary relate to the need of additional clerical assistance in order to meet the demands which are increasingly made on the Public Health Bureau.—Issued by U. S. P. H. Service.

TAKE CARE OF YOUR EYES.

Sight being quite as valuable as life itself, the admonition would seem to be necessary that the eyes should be scrupulously cared for. Yet, as a matter of fact, the waiting room of city and country oculists alike, are crowded, day after day and week after week, by people who have been criminally negligent of their vision. Reading too fine print, unleaded and often on glossy paper, is responsible for much of the mischief. Poor illumination is another destructive agency. Over-indulgence in tobacco or alcohol and reading too soon after recovery from an acute illness, play also a part in the throwing away of sight. One of the least excusable agencies is the use of proprietary nostrums, both made and sold by men who know little or nothing about the eye, in addition, have never examined the eyes of the individual patient. These nostrums are generally advertised as "great discoveries," but consist of substances well known to educated oculists, and which are useful or harmful according to whether the person who employs them does or does not understand the diseases of the eye and the effects of medicines thereon in all their varying stages. Spectacles, too, are bought by many people who should know better, of quacks whose only education consists of a six weeks' correspondence course under the ignorant auspices of a diploma mill. The deplorable results are seen by educated oculists daily. The eye is,

in fact, so valuable an organ, and is so frequently diseased in its deeper parts, while, externally, it seems to be absolutely sound, and, furthermore, is so frequently affected by the diseases of various other portions of the body, that no one should be entrusted either with its treatment or with its fitting of lenses, save those who have properly graduated from a first-class medical college, and, afterwards, have made a long, careful and scientific study of this priceless organ.—Journal A. M. A.

CANCER DOES NOT RETURN.

The general impression that cancer is an absolutely hopeless disease and that surgery is a futile means of cure is often expressed by the not too well informed or the unfortunate. "What's the use- It always returns." In fact, it had long been believed, even by good surgeons, that a recurrence was, as the name implies, a return of the cancer after it had been completely removed. The present and more hopeful belief, and undoubtedly it is the correct one, is that the original malignant growth was not entirely removed. In other words, the recurrence is a definite and direct continuation of the original growth, of which at least a microscopic part has not removed. When the original growth is removed completely there is positively no danger of recurrence. In modern operations for cancer in order that the removal may be complete or that no tissue containing the dangerous microscopic cancer cells may remain, the organs or parts in which the growth is located are removed as widely as anatomical relations will allow. In the early stages cancer is a strictly local disease and the surrounding tissue only becomes involved as the disease progresses. If the growth is discovered and removed very soon after its inception the operation can hardly be classed even as "dangerous." If, through ignorance or fear, one procrastinates and does not permit operation until the growth has spread through the adjacent glands and tissue the uncertainty of getting out all the malignant cells is greatly increased. So it is very easy to see that in the early removal of cancer lies the hope of cure—and the earlier the removal, the stronger the hope.—Journal A. M. A.

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SOME PERTINENT POINTS IN VASCULAR SURGERY. REPORT OF CASES.*

By E. T. Newell, M.D.,
Chattanooga, Tenn.

I was stimulated in writing this short paper on this important subject by the number of contributions that are being given to vascular surgery by men from all parts of the country. So much so is this the case that were I called upon to designate what special branch of surgery is most prominent in the minds of the surgeons today, I would unhesitatingly pronounce it "surgery of the vascular system."

At the Chicago meeting of the Clinical Congress of Surgeons in 1913, one of the most interesting clinics of the meeting was one by Alexis Werelius, in which he demonstrated on animals incision and suture of the heart muscle. In London, at the meeting of the International Surgical Association, 1914, a paper by Dr. Rudolph Matas, of New Orleans, on the treatment of aneurisms, discussed by Von Oppel, of St. Petersburg, was one of the most important papers of the meeting. At the last meeting of the Southern Medical Association at Richmond, Va., the papers of Drs. Bertram Bernheim on "Reversal of the Circulation" and Duncan Eve, relative to distinguishing between living and dead tissue in traumatised limbs, were much discussed and appreciated. The daily clinics at the Richmond meeting by Dr. Shelton Horsley on "Vascular Suture"

were fully attended and exceedingly instructive.

There are so many men in this country and abroad that have done such brilliant and original work along the lines of vascular surgery that it would be impossible to give due credit to them all; but, in the states, it would not be proper to discuss this important branch of surgery without mentioning the names of Alexis Carrel, of the Rockefeller Institute; Halstead and Bernheim, of the Hopkins Faculty; Matas, Gessner and Carroll, of Tulane; Horsley, of Richmond; Alexis Werelius, of Chicago; Crile, of Cleveland; DeWitte Stetton, of New York, and others. In Europe, Von Oppel, of St. Petersburg; Lexer, of Jena; Von Eck, and others, have done excellent work in this branch of surgery.

In a paper so short as this one, I could not possibly hope to cover all the points in this rapidly growing subject, but I hope to bring out some of the more important ones for your consideration.

Technic.

Nowhere else in surgery is asepsis, careful handling of the tissues, and deftness in your work so important as in vascular surgery. In the work on the larger blood vessels, as for instance the Matas endo-aneurismorrhaphy for aneurism, ordinary small, full curved, round needles threaded with small catgut, with the usual surgical instruments will suffice. But, in all other work, especially on the smaller vessels, No. 16 straight or curved needles, with 0000 silk (preferably black) are necessary. This is put up by the suture makers in liquid petroleum ready for use, or you can purchase

*Read at meeting of Tennessee State Medical Association, April, 1915.

the needles and the thread, put them in a piece of gauze, together with some petrolatum, place this in a small bottle and sterilize the same in an ordinary sterilizer. If you have never tried to thread one of these small needles, or to use one of them, you will find your first experience difficult and interesting.

The arterial staff now so much in use, while not a necessity for this work, is of great assistance, especially to beginners. It keeps the vessel that is being sutured elevated, so that you can "get at it," to speak, and it only requires one assistant to help you, while, if you use the three guy sutures ordinarily used, you will need at least two assistants.

In controlling the circulation in the small vessels for an arteriorrhaphy, phleborrhaphy, transfusion, resection of vessel or transplantation of vessel or organ, the clamps devised by Bernheim that possess just sufficient spring to compress the vessel without injuring the intima, I find most convenient. Where considerable force is necessary to shut off the circulation, the instruments should be capped with rubber to prevent trauma. In handling a cut vessel, whether caused by accidental means or done in the experimental laboratory, intima should be handled as little as possible, for it is from trauma to this coat that we get the most formidable obstacle to success in vascular surgery—thrombosis. Without going into the detail of the formation of a thrombus, it is well to say that when the intima of a vessel is injured, thrombokinaise is formed, and this by its action on thrombogen produces fibrin ferment, the active principle in the formation of a clot. The formation of thrombokinaise is then prevented by handling the intima as little and as gently as possible. When necessary to do so, use special, probe pointed, thumb forceps of the Bernheim type. The formation of thrombokinaise is further prevented by covering the exposed intima as soon as possible with liquid petroleum, and by using needles and thread previously coated with the same substance.

In all vascular surgery, the principal point in the suturing of the vessels together, lies in the eversion of the opposed ends or sides of the vessel to be united. This is just the

opposite to intestinal surgery, where the peritoneum is inverted. The reason is quite logical, for the endothelial coat is on the inside of the vessel and the outside of the intestine.

Of the sutures in this work, I am inclined to prefer the one used by Horsley, of Richmond, the double mattress suture. It is the one that is probably the best adapted in the majority of cases. This suture gets a better hold on the tissues, is at right angles with them, and is less liable to tear out. It shows less in the interior of the vessel than any other suture. This last factor is an all important one, for the less the suture shows in the interior of the vessel, the less the liability to clot formation.

Carrel, in his admirable work on transplantation of organs, favors what he terms "The Patch Method." Instead of cutting the vessels as they come off from the main vessel, he takes out a small section of the vessel, oval in shape, around the branch that supplies the organ. His reason for doing this is that when he sutures the transplanted organ or vessel in place, the line of suture is away from the inlet to the branch that supplies the organ, and in case a thrombus should form, it would be too far distant to occlude the vessels supplying the organ.

I wish that I had the time to describe in detail the operation of endo-aneurismorrhaphy of Matas, for aneurisms in general; the use of the Halstead-Matas bands in the obliterative operation for aneurism; the detail of the use of the Bernheim outfit for direct transfusion; the reversal of the circulation in gangrene of the leg by Bernheim and in goitres by Carrel, but the writer can only refer to these ingenious operations, and urge those who have not read the reprints by these men on these subjects to do so, or better, to purchase their text-book that has been recently put on the market covering the subject fully.

Before dismissing this part of the subject, I feel that I must say a word in regard to the technic of ascertaining whether the collateral circulation has been established, and in establishing same, before operations for aneurism of the extremities. This applies especially to the obliterative operations, by

ligatures, bands, or sutures within the vessel. If you know beforehand that you have a good collateral circulation, then at the time of the operation you are not compelled to do the ideal operation of Carrel, or the reconstructive endo-aneurismorrhaphy, Matas, but may use the simple, quick and efficient method of applying the aluminum band above the site of the aneurism. The method of ascertaining the collateral circulation is a simple one. Elevate the extremity for two or three minutes, apply tightly an Esmarch bandage, beginning at the toes and extending to and above the aneurism, then apply the Matas compressor to shut off the circulation in the affected vessel, just above the bandage. After a few minutes, quickly remove the Esmarch, and if you have a sufficiently developed collateral circulation, a living color will follow your bandage down to the extremities, and the two extremities in a few minutes will have practically the same color. The method is so simple that one is not justified in attempting an operation on an aneurism until he has first ascertained the condition of the collateral circulation. If the collateral circulation is not sufficient, this very same procedure of testing it will, after a limited number of treatments, develop the collaterals.

At the present time, the suture of punctured and incised wounds of vessels that otherwise would necessitate amputations, is and should be an everyday occurrence. The patching of vessels with peritoneum or part of a near-by vein, or even the transplantation of several inches of an artery or vein to take the place of the one destroyed, is being done by men doing this work. Where massive excisions for malignancy have been performed, the vessels destroyed are replaced by a segment of an autoplasmic or a heteroplasmic vessel from the living subject or one that has been in cold storage for days and weeks. The autoplasmic transplantation of an organ, as the kidney, ovary, or an extremity, is no longer a dream of the scientific, theoretical surgeon, but a common occurrence in the experimental laboratory. The heterografts are only partially successful, for after a lapse of a month or two, they usually atrophy.

The work of James B. Murphy of the Rockefeller Institute along these lines is rapidly

progressing, and no doubt the near future will reveal the cause of this late atrophy. It is stated now upon good authority that homografts from the same family live longer than those where there is no blood relation. Possibly some special preliminary examination and modification of the blood, fluids or secretions of important organs will be necessary before homografts will take like autografts.

One of the most practical and simple operations in vascular surgery is transfusion of blood. The direct and the indirect methods have their advocates, but in the opinion of the writer, the direct method is so simple that he can see no reason why it should not be used in preference to the other. There are so many occasions for the use of fresh blood, sudden traumatic hemorrhage, hemorrhage from ulcers of the stomach and intestines, etc., that I feel sure that the future will see strong, healthy members of the family furnishing their pure, refreshing blood to their sick and impaired relatives, both in the operating room and in the sick room.

Reports of Cases.

The few cases that I have reported are based on my observation of the work and my reading of the reprints of Carrel, Bernheim, Matas, Horsley, Werelius and a few others, together with the work I have done in the experimental laboratory of our sanatorium. My first work was reversing the circulation in the common, carotid artery and the internal jugular vein. This was followed by transfusion with the Bernheim canulas in the same region. The common carotid was cut and sutured after the method of Carrel, cutting the abdominal aorta and suture, cutting the femoral artery and suture, and later the application of the Matas-Carroll band for forty-eight hours to the external iliac with removal, and with perfect re-establishment of the circulation were done along with other similar operations with perfect success. None of the animals died from the operation or later from after effects.

The three cases that I will report briefly have occurred in the past four months, and since my limited experimental work on animals. The first case is the application of the

Halstead-Matas aluminum band to the left common iliac artery for aneurism of that vessel, and for a circoid aneurism of the popliteal vessel. The case was one of long standing. There was a varicose ulcer below the knee of many years' duration. He had almost a fatal hemorrhage from this on two occasions in the past five years, besides this last condition, there was a slight adenitis in the inguinal region. I ascertained before the operation that the collateral circulation below the groin was good, but could not find out anything about the collateral above this region. At the time of the operation, I thought that I was dealing with an aneurism of the external iliac artery, and for this reason was not worried about the collateral circulation. I went in to the outer side of the peritoneum, dissecting it back, and to my surprise, found I was dealing with a fusiform aneurism of the left common iliac. The band was applied above the aneurism, just below the bifurcation of the aorta. The patient did well for a week, the leg had a good color, was warm, and there was no sign of gangrene. At the end of the first week, he developed haemoglobinuria, and for another week I thought that he would not survive this trouble. By appropriate treatment, the urine cleared up, and at the end of a week there was no trace of albumin in the urine. During the third week, his great toe and the tips of the other toes suffered from dry gangrene. He also developed an abscess in the middle third of his thigh, posteriorly. This produced general sepsis and caused his death on the twenty-second day. I attempted to save his life this day by amputating his leg above the infected area, but probably waited too long. At the time of the amputation, the vessels bled freely, almost as though no band was on the common iliac artery. This showed how well the collaterals were doing their work. I may say that this was the first time a band had ever been placed on either of the common iliac arteries, and I feel that I was probably robbed of success by my failure to appreciate enough the focus of infection.

Another interesting and recent case is that of the foreman of a wrecking crew, who had his thumb, index and middle finger, together with the meta-carpal bones mashed off. The

remaining two meta-carpals were fractured and the skin and fascia were torn off the entire hand, wrist and part of the forearm. The ring and little finger were hanging to the broken meta-carpal bones. The skin on the fingers remained intact. An amputation looked to be the only possible, proper thing to do, but when the constrictor was released, the radial artery spurted and the ulnar, which was perfectly bare, was seen to pulsate and seemed to be all right. Thinking the latter might carry enough blood to the remaining fingers to keep them alive, I decided to trim up the remnant of the hand and save the two fingers. The cuff of skin five inches long, hanging down from the lower third of the forearm, was sutured down as far as possible, and all bleeding points ligated. Then it was discovered that the ulnar had a rent in it just as it turned into the palm. This was repaired, the broken fragments apposed and the hand dressed in the usual manner. It is now six weeks since this work was done, the fingers are living and it will only be necessary to do a small amount of skin grafting to give this man a fairly useful extremity. The motion in these fingers is very slight, but, if he only has a hand that can be used as a hook, it is far better than an amputation with no hand at all.

The last case that I call your attention to was an emergency operation following hemorrhage into the right pleural sac from a gunshot wound of the sixth intercostal artery. After opening the pleura, and ligating the vessel, the patient was suffering so intensely from shock, loss of blood, that I feared he would die on the table. His brother, who had had his arm prepared before the operation, was placed alongside, and through the Bernheim canula, was pumping blood into the patient's median basilic vein in a few minutes. In three or four minutes, the patient's pulse becomes perceptible, the pallor left his face and a death on the operating table averted. Thirty minutes later, he was in his bed, conscious and talking to those around him. There is one point about transfusion that I think is worthy of mention; give just enough blood to raise the blood pressure to 120 to 125, and thereby relieve the distressing condition. Don't try to give a definite quantity, but give it

for the effect, and as soon as you accomplish this, quit. Do not give enough to overload and overwork an already weak heart.

While it may seem that these operations are quite difficult, that it requires special technic to do them and that they can and will only be done by the surgeons of wide experience and at the larger clinics, this is not entirely the case. It is the intention of the writer to call attention to the rapid progress that has been made and is being further developed in this particular branch of surgery, to the end that the general profession may realize what can be done for this class of patients.

That the work in its entirety is not a specialty, I do not contend, for I believe in the near future we shall see vascular surgeons just as we now have abdominal surgeons, genitourinary surgeons, gynecologists, etc.

Alexis Carrel in a paper read before the American Surgical Association in 1914 on "Experimental Operations on the Orifice of the Heart" has this to say in closing:

"The purpose of these operations was to show how extensive a plastic operation on the heart can be made without danger to the life of the animal. The results demonstrate that many factors of safety have been placed in the technic. It will perhaps be possible to perform successfully more complicated operations than those we have described. These results are being published at the present time merely to show that plastic operations on the heart need not be dangerous. It is not impossible that some day surgeons will be able to cauterize valvular lesions or to repair them as we do today in our experimental operations."

In conclusion, I will say that we are today successfully grafting skin, bones, muscles, nerves and vessels. When will we see the everyday surgeon doing an autoplasty of the leg, thigh, forearm or arm? Just as soon as we perfect our technic by actual work in the experimental laboratory.

DISCUSSION.

DR. C. N. COWDEN, Nashville: I congratulate Dr. Newell upon bringing us this timely paper. The possibilities of visceral surgery are unlimited, almost. We are now in the dawn of the day when this is going to transform a great many of our surgical ideas. While it is in some measure in the experimental stage, yet it is wonderful to read of the things being done in the

transplantation of organs and limbs in the dog especially.

I was impressed with this not long ago in visiting a Northern clinic where they were doing research work along this line, and it is startling the things they are undertaking just now.

DR. E. T. NEWELL (closing): I want to relate one case which I think is really remarkable, and no doubt you are familiar with it. It is a case where a glaucomatous eye was removed about a year or two ago by Dr. Magitot. This eye was preserved in Ringer's solution or serum for ten days. He had a patient come to him whose cornea was destroyed by an alkali. He dissected out the cornea of the glaucomatous eye and replaced the one destroyed by the alkali. Several months afterwards the patient was able to see. This shows what can be done in connection with this work.

Again, when a man is stabbed through the heart, he is not killed. There is simply a disturbance of contract between the organs. Elemental death does not take place for weeks and months, and if you keep the patient clean, the organs clean and the skin, and thereby prevent microbic invasion from the intestinal canal, you can save these parts in the proper pabulum for months.

SKIN GRAFTING.*

By Jere L. Crook, A.M., F.A.C.S.,
Jackson.

The practice of skin grafting, while usually regarded as a comparatively modern surgical feat, in reality was performed hundreds of years ago. In Leonard Freeman's little book on this subject he states that it was performed by the ancient Hindus two thousand years ago, and in support of this assertion he further relates:

"It was the custom in India to punish certain offenses by cutting off the nose. As an almost necessary consequence, there appeared at an early date men skilled in plastic surgery, who belonged, strangely enough, to a low and despised class, the tile-makers caste. Their work is said to have been excellent, even superior in some respects to that done at the present time. One of the most remarkable achievements of these pioneers in surgery was the replacement of the nose by a graft from

*Read at meeting of Tennessee State Medical Association, Nashville, April, 1915.

the thick skin of the gluteal region, a feat which even now cannot be repeated with cer-



tainty. When we consider that the subcutaneous fat was included and that no support could have been had from underlying tissues, the success obtained seems little short of marvelous. . . .

"It is probable that skin grafting, like some other arts, was largely lost sight of during the middle ages, although here and there a more or less authentic account of an isolated case has been preserved. For instance, it is related by Sancassani (1731 to 1738), that a female street vender, in order to prove the efficacy of a certain salve, was accustomed to cut a piece of skin from her leg, pass it around the audience upon a plate, and then replace it in its original position, covering it with salve.

Such perfect union took place that the site of the operation was scarcely discernable.

"About the end of the eighteenth century some account of the Indian methods of grafting was brought to Europe by travelers. The statements, however, were credited by few, and those who did believe were generally disappointed when they tried the experiment themselves. Nevertheless Van Helmont states that Tagliacozza, a Bologna surgeon famous for his achievements in rhinoplasty, constructed a nose for a patient in Brussels from the skin of the arm of a workman; but Tagliacozza has been credited with so many wonderful things that it is difficult to sift the true from the false. The skin from the back of a student's



hand is said to have been used by Dzondi in the formation of a woman's nose, and Bunker succeeded in getting a portion of a graft from the thigh to adhere in a similar operation.

“As early as 1836, Hoffacker, surgeon to a students’ duelling corps in Heidelberg, succeeded in reuniting numerous severed portions of noses and a piece of a lip.”

pletely severed from the body seven hours became reunited. Another case where the soft parts of a nose grew in place after having been separated an hour is reported by Kelley



In recent medical literature we find similar cases reported. In Johns Hopkins Hospital Bulletin, October-November, 1892, Finney reports a case where a finger after being com-

in the Times and Register ,Philadelphia, August 16, 1890.

Grafts have been defined as autodermic when from the patient’s own body, and iso-hetero or

homo-dermic when taken from another individual. The terms autogenous and heterogenous grafting are also used to describe the two sources of supply. As a rule, the grafts thrive best when taken from the patient's own body. In my own experience, I have undoubtedly secured the best results I have ever had when

two cases getting the skin from several individuals.

I have always been very careful to ascertain that the donors were in perfect health, as there is no doubt that diseases can be transmitted in this way. It often happens that the patient's general condition is so far below normal that it would be unwise to impose on him the nervous shock incident to removing the skin from his own body. In such cases we are fortunate if we can find healthy donors in whom the spirit of altruism and brotherly love prevails to the extent necessary to cause them to shed their blood and cuticle for the afflicted one.

In these modern days, when greed and selfishness seem to predominate in the hearts of men, it is refreshing and uplifting to find men ready to make a blood sacrifice for one of their friends. It has been my privilege and experience in every case where I have asked for volunteers to find a ready response. In one instance where I needed isodermic grafts to save the foot of an injured engineer, five of his friends (fellow employes) volunteered and gave all the skin I required, without fear and without reproach—and the foot was saved. No doubt many of you have seen such examples of unselfish generous courage, and have felt as I have, the moral uplift of such an experience.

As to the methods, those of Reverdin and Thiersch are the two principal ones used, Reverdin being the pioneer. His report to the Societe Imperiale de Chirurgie December 8, 1869, first brought the subject prominently before the world, and was followed in 1872 by a more exhaustive paper in which he states that while he spoke of the small bits as "epidermic grafts," yet that title is not wholly correct as he included a little of the dermis and the whole epidermis.

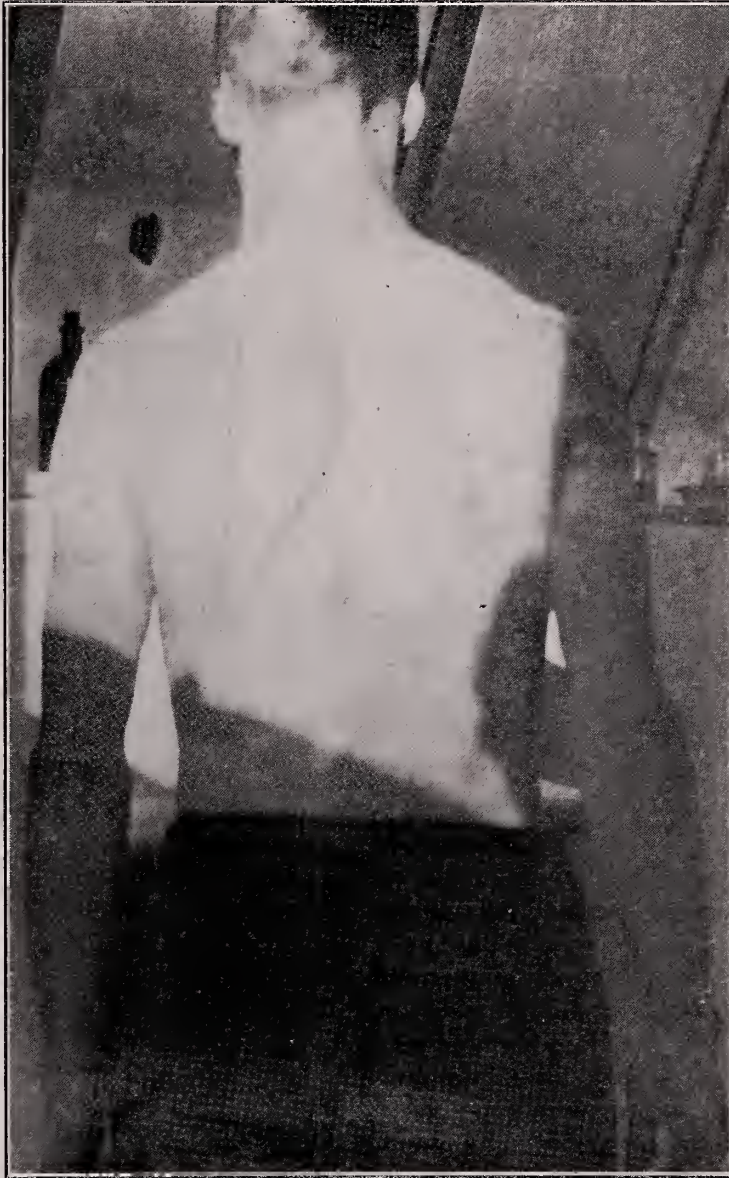
In a very interesting paper by Dr. J. S. Davis of Johns Hopkins (Journal A. M. A. September 19, 1914,) he makes a very forceful plea for the "use of small deep grafts" taken and applied according to Reverdin's suggestions, except that he takes more of the true skin than in the older method. His article is profusely illustrated and quite clear as to technique and treatment. I have read and studied it with interest, and yet I must confess he has



I secured the grafts from the patient himself; although in several cases when the patient's vitality was not so good, I have had most satisfactory results with the isodermic grafts; in

failed to convince me of the superiority of his modified Reverdin method to that of the far more frequently used mode of Thiersch with its modifications. The chief objections to his type of grafting are its tediousness, time required, its poor cosmetic result and the greater tendency to keloid formations. I cannot find

Where it is impracticable to secure a healthy granulating surface, the Reverdin grafts may be used with greater chance of success, but if one is willing to properly prepare his surface for grafting, and give proper attention to the technical details of the work, the method of Thiersch will yield far more brilliant results.



a single good reason for preferring it to that of Thiersch.

Although describing the technique in detail, Freeman states: "In fact the only excuse for using the Reverdin method is its comparative painlessness and insignificance as an operation."

As to this procedure, Freeman remarks: "There is no process of skin grafting so simple, so reliable, and so generally applicable as the method of Thiersch, and yet it has never received the thorough recognition to which it is entitled."

Therefore, it seems proper to emphasize the

value of this procedure on occasions such as this and to relate personal experiences to further stimulate interest in the subject.

In my own work I have never found it necessary to anesthetize my patient in order to scrape away exuberant granulations. A few days' treatment with antiseptic irrigations usually puts them in healthy condition. If they are sluggish and indolent, painting with iodine, followed by a 25 per cent solution of balsam Peru in castor oil will furnish the necessary stimulus.

When ready for grafting the surface should be thoroughly irrigated with normal salt solution before placing the grafts.

The best place for obtaining the grafts is the anterior surface of the thigh, although I have frequently taken them from the arm when I did not wish very long grafts and when several friends of the patient are giving skin it is quicker and easier to take it from their arms. When the skin is taken from the patient himself, I prefer the thigh. It is better to anesthetize the patient in this case. In fact, it is far better to get the skin from the patient himself if his general condition will admit of it. In this event no one is made to suffer, and larger and better grafts can be removed when one is not hampered by the nervousness and suffering of the donor.

Some practice is necessary before one can remove the grafts deftly. An assistant should make the surface tense by placing his hands on both sides of the limb or pulling the skin down while the operator pulls it up, and with a very sharp razor cuts long strips. The operator cuts towards himself with a side-to-side sawing motion, keeping skin and razor wet with salt solution. The razor should not emerge until a strip sufficiently long has been cut, as it is much easier to manipulate large grafts and requires less time. It is not necessary to cut through the entire thickness of skin, but if this is done, the value of the graft is not diminished, although the scar from its removal is longer in healing and more permanent.

The strips of skin will often curl up on the razor, but may be smoothed out in a basin of warm sterile salt solution, using a long-handled needle and small forceps. Afterward I place

them on oil silk wet with salt solution and slide them from this onto the granulating surface. Some authorities advise overlapping



Ten Days After Grafts Were Applied.

each strip and the borders of the ulcer. If skin is very plentiful this may be done, but I have never found it necessary. If I use a long,

broad graft I perforate it to facilitate drainage and enhance its chances to live.

With Thiersch, the removal of granulations was one of the principal features of his original method. He claimed that the more or less large and soft, superficial granulations, during their slow transformation into connective tissue, were the cause of cicatricial contraction, and that this contraction could be avoided by scraping away the granulations until firmer tissue was reached. He also thought that grafts grew better when this was done. This advice was universally followed until it was demonstrated by Schnitzler and Ewald that it is unnecessary to remove healthy granulations and that grafting can be done directly upon their unaltered surfaces with the production of a movable skin, and without appreciable subsequent contraction.

Instead of scraping with a curette, Sick simply rubs away the granulations with a bunch of gauze, or a stiff nail brush may be used. Halsted, McBurney, and others prefer to shave the surface with a scalpel or an amputating knife, claiming that a smoother surface is obtained devoid of partially separated and bruised portions of tissue, which tend to become necrotic and interfere with the vitality of the transplanted skin.

As stated previously, I have not found it necessary to curet or shave off the granulations. I prefer a moist dressing of normal salt solution on gauze, with strips of perforated oil silk next to the wound; this is kept in warm saline solution until ready for use. Numerous methods of dressing are in use, including dry dressing, the open method with a wire cage, sterilized olive oil, boric acid solution; splinting the grafts with wide meshed curtain netting soaked in gutta serena and chloroform, silk netting treated with paraffine, etc.

Bernhard advocates exposure of the newly grafted area for a short time to the direct rays of the sun; while Schepelmann douches the new skin for several weeks with hot air, by means of a special electric instrument, claiming that better and more permanent results are thus obtained. Thies covers the grafts with a thick layer of fine sand, which has been sterilized by boiling in a 1 per cent solution of

sodium carbonate and then dried. He considers that this method has a number of advantages, among which the removal of fluids by capillary suction, the splinting of the grafts, and the prevention of coagulation of the discharges by the alkalinity of the material. The sand should be changed frequently.

I have found the method I have used entirely satisfactory and have therefore tried none of these others. I usually remove the dressing in from five to seven days. The pictures illustrating are of the two most seriously burned patients I have ever successfully treated. In both, recovery was due to skin grafting. Not only restoration to health, but also prevention of deformity and distressing disability was accomplished by grafting. Both patients, together with five others, were burned and scalded in a boiler explosion at the Bemis Cotton Mills near Jackson, and all were brought to our sanatorium for treatment. The white patient, whose photos are here shown, was burned almost beyond recognition. His face, head, neck, ears, hands, arms, legs and entire back were burned to the second and third degree. The photo shows the ears partly burned off, but gives no adequate picture of the depth and extent of surface involved. It does show the fine, smooth appearance of the back and legs, however, and this cosmetic and functional result is due to Thiersch grafts (in this case of heterogenous origin), the donors being his brother and a friend and a recently circumcized baby, whose foreskin played an important part in covering an extensive raw, ugly, granulating area on one leg. The patient's vitality was very low, and at times he ran a high temperature, but finally after a very tedious convalescence he was restored to perfect health with no functional disability of limbs or body.

The negro, whose photos are shown, suffered a compound fracture of the skull, necessitating trephining and removal of fragments of bone from the brain. In addition he was burned extensively and deeply on face, head, back, side, arm, thigh and legs. The burn on calf of leg was of the third degree, extending from ankle to three inches above the knee. The muscles

partially sloughed away, almost exposing the vessels in the popliteal space.

To secure donors of skin for him was impossible. When the request was made of his wife, she was horrified and exclaimed, "Who, me, let you cut off my skin for him? Naw sir, I didn't promise to do dat when I married him." Fearing that I would insist, she left the hospital and eventually deserted the patient and has nevermore returned to his bed and board. The spirit of altruism has not yet permeated the colored race sufficiently for them to agree to shed blood for each other.

Therefore, the patient was anesthetized and the required amount of skin in long, broad strips was removed from the opposite thigh and successfully grafted on leg and side and axilla. The grafts prevented contraction that would have seriously crippled the patient, and hastened and insured his complete recovery.

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DISCUSSION.

DR. J. M. T. FINNEY, Baltimore: I have enjoyed Dr. Crook's paper very much, and I congratulate the Association upon having heard such an excellent presentation of the subject of skin grafting. He has covered it, I think, very thoroughly.

I am amused every time I think of the case of my own to which Dr. Crook has referred. It was a case where the ends of the middle and ring fingers of a workman were cut off. He was working at a table in a tinshop. There were knives moving up and down in this way to chop sheets of tin (indicating). The patient was smoking a pipe at the time, let it fall, and stooping down to pick it up, lost his balance. Putting his hand out to recover his balance, the ends of the two fingers went underneath the knives and were chopped off. The workman who came with the patient stated the exact time at which the injury occurred. The patient came to me something like seven hours after the accident with the portions of the fingers wrapped in a newspaper carried in his pocket when he came

in. I did not use antiseptics at all, and that is the reason probably the fingers grew. I soaked the fingers in warm water, washed the parts thoroughly and applied the fingers carefully and accurately, putting in a stitch at the four cardinal points, and with strips of collodion I brought the parts into very close apposition, then put on a splint and sent the patient home. He made an uninterrupted recovery without any suppuration at all, or without any reaction. The fingers grew. I lost trace of the man for two years, then he came back one day and showed me the two fingers. I have seen him once or twice since. He came back to see me eight or ten months ago. None of his joints were very supple, but the joints of these fingers were as supple as any of the others.

That case was subsequently quoted by one of the medical journals and a copy of it was sent to me in which there was a question mark after the time. So my reputation for truth and veracity was questioned by that case. I can only say that the time was taken by the patient and the friend who brought him to the hospital, and I have no reason to doubt their veracity.

The whole question of skin grafting is one of the most important phases of surgery, and one which has saved and is constantly saving patients a great deal of time and a great deal of pain and discomfort. It seems to me that the profession really is not sufficiently alive to the advantages accruing from skin grafting early in other malignant cases. In breast cases it is of especial service.

DR. CROOK (closing): I did not have time to finish my paper. There is one other case that has occurred in my practice which shows that we can resort to grafting later where we have not done so primarily.

When we treat these cases of burns we have some times distressing sequelae, and improperly treated burns are brought to us with bad contractions. I have had one such case in a negro child that was burned out in the country where the conditions for treating it by the local physician were not ideal. The feet contracted to such an extent the child was not able to walk. It was two or three years old, and the case looked discouraging. There did not seem to be much surface to graft. After clipping the contractions, however, I was able to take a sufficiently large amount of skin from the thighs with the patient anaesthetized. I then severed all contracted areas, including portions of the tendon, to get the foot in the over-corrected position and place grafts upon the raw surface, and in this way secured a splendid functional result. The ankle joint is quite supple and the child walks normally. So even in cases where the primary treatment of the burns leaves deforming contractions, it is possible by careful operation to restore the

parts to practically normal function, thereby broadening the field of usefulness for skin grafting.

HOW SHALL WE TREAT APPENDICITIS?*

M. C. McGannon, M.D.,
Nashville.

The time has not yet arrived when an apology is necessary for an article upon the subject of appendicitis.

Medical men, both internist and surgeon, are agreed upon the fact that many cases of appendicitis offer problems in diagnosis that may, and do, puzzle the most experienced practitioners. When, however, the symptoms are so pronounced that the disease can be recognized, they are still far from having a crystallized opinion as to the proper line of treatment to be adopted.

With the hope that I may be able to aid you in arriving at a correct conclusion as to the proper conduct of such cases, it is my desire to present for your consideration a report of the cases of appendicitis that have come under my care during the year of 1914. By the aid of this, I hope to show what is the safest method of treatment of such cases.

During the year of 1914 I had referred to me 134 cases in all stages of the disease; 132 cases were operated upon; 2 cases were dying of peritonitis when I saw them, and were not subjected to operation; 68 cases I classed as chronic. In each of them the diseased state was sufficiently manifested as to be readily recognized by the visitors and assistants at the operation. Sixty-six cases were acute, and of these four died.

The acute cases that came under my observation: Four on the first day; 19 on the second day; 12 on the third day; 13 on the fourth day; 10 on the fifth day; 2 on the sixth day; 2 on the seventh day; 3 on the eighth day; 1 on the ninth day.

Those that died after operation were seen, one on the seventh day, one on the eighth day, and two on the fifth day.

These four cases were all suffering with gen-

eral peritonitis when first seen by me, though they were not deemed moribund, at the time they were submitted to operation. The gravity of their condition, however, were recognized, both by their friends and by the consulting physicians. The two who were moribund when seen by me, each had been sick five days.

Before taking up the treatment of this disease it may be well to consider briefly some facts in the pathology of appendicitis.

The inflammatory condition begins in the mucous membrane and it may be diffuse, affecting this membrane in its entirety, or it may be circumscribed and expend its force upon a small part of it only. The inflammatory process may subside without involving the muscular and peritoneal coats of the viscus, or it may, and more usually does, affect one or both. It may end in resolution, or it may proceed to any degree of destruction, up to complete necrosis of the whole organ.

The chief symptom, *pain*, unfortunately is not a sure index of the destructive force of the disease and hence cannot be relied upon as a guide to treatment.

The pain may be due to different causes:

It may come from obstruction of the outlet of the appendix by a kink or lith, or it may be due to inflammatory swelling with distention of the lumen of the organ beyond the point of obstruction; or it may be due to the irritation of poisonous material within the appendix, or it may be caused by the inflammation extending to the peritoneal coat.

If the pain should be explained by any of these causes, we would not expect it to be very severe unless the appendix was in proximity to the parietal peritoneum, since we know that the serous lining of the abdominal wall is the only very sensitive part of this membrane. Clinical experience bears out our anticipation, since as a matter of observation the pain in any stage of appendicitis is far from being agonizing.

Tenderness varies very much, depending upon the situation of the inflamed organ. If it be close to the anterior abdominal wall, the tenderness may be very marked, even when the pathology is not great, and, on the other hand, if it be deeply placed, underneath gaseous dilated intestinal coils, there may be but little tenderness.

*Read at meeting of Tennessee State Medical Association at Nashville, April, 1915.

Rigidity of the overlying muscular wall, while usually of great diagnostic value, sometimes fails us if we attempt to use it as a guide to therapeutics, since like pain, it is influenced by the position and condition of the inflamed structure. At times, it will be marked, with no great pathology existing, and again, it may be almost, if not quite absent, when the appendix is actually necrotic.

Fever, too, cannot be relied upon as an index to therapeutic measures, since it is the experience of every practitioner to see severe cases in which there is but little, if any, elevation of temperature.

A leukocyte estimate may help in diagnosis, but the majority of practitioners are not prepared either by experience or training to make an efficient blood examination, and it is of little value as an outline to treatment.

The symptoms I have mentioned, taken as a whole, may form a picture sufficiently plain for diagnostic purposes, but it cannot be relied upon to inform us in regard to the progress of the hidden pathology, as many men have found to their chagrin.

That the disease is essentially a surgical affection, is admitted by all authorities and this is further proven both by its pathology and its course. No medicines that we possess have any power to stay or control the progress of the affection. This does not mean that there is no medical side to appendicitis.

The general practitioner is usually the one first to see the sufferer and upon him devolves the responsibility of making the diagnosis and outlining the treatment. He is looked to for relief from the suffering, and he is the one whose duty it is to protect the patient from the unwise doping and purging insisted upon by the family and friends. He, too, is the counsellor upon whose advice the patient and family depend in determining whether a surgeon shall be called or not.

The time has now arrived when he must bear the censure of the public, if he calls the surgeon *too late*.

Every surgeon, again and again, has had the painful experience of finding himself unable to protect the family doctor from the outspoken blame of "too late." In many cases the delay is due to the wishes of the friends, but these same friends are only too glad in times of disaster to shift the responsibility to

the shoulders of the medical advisor, who has not been sufficiently insistent.

More and more is the public learning that the disease is surgical and requires early operation.

Less and less are they fearing and combating what they are learning, viz., that appendectomy is a procedure almost without danger if undertaken in the early hours of the affection.

What then is our duty when we have made a diagnosis of appendicitis?

Let us for a moment look at the results in the cases I have already set out.

All those operated upon, while not in an active state, recovered.

All those subjected to operation during the first two days of the disease, recovered without drainage or morbidity and were out of bed as early as those so treated when in the chronic state.

Of those operated upon after forty-eight hours, twenty-nine required drainage and were in bed from fifteen to thirty days, while those that died were not seen by the surgeon until after the fourth day.

In each case, the hope had existed that a medical treatment would have carried them safely through.

If we turn to the accredited authorities who have written upon this subject, we find that their teachings accord with the results that I have reported.

Statistics gathered from all sources further prove that cases in the chronic state or cases in the first day of the disease equally, if operated upon, have practically, neither mortality nor subsequent morbidity; while with each day of delay thereafter the danger increases. Why delay?

It is equally well known, and statistics have proven that the disease when not treated surgically has a mortality variously given as from 8 per cent to 15 per cent. If we accept the smaller number, that is a death rate of eighty (80) in a thousand when treated medically, as against one in a thousand if given the benefits of surgical treatment, it is difficult to understand why a delay in the choice as between these two, should ever occur.

The explanation is found in the optimism and hope that ever exists in the human breast.

Unless the subject be presented in a firm, cold matter-of-fact way, so that the dangers are well to the fore-front, the public will only see the 92 per cent that recover and forget the 8 per cent that die.

There is another reason to account for the fact that both the physician and the *sufferer* at times sleep upon their period of *grace*.

It is the erroneous teaching that there is great safety in waiting for an operation in the interval between attacks. A careful consideration of the voluminous reports upon this subject that have been presented must convince the most skeptical that to await the interval means a mortality of 8 per cent; that if it is safe to await the interval in *one* attack it is safer to await an interval in each subsequent attack, which if true, would wholly eliminate surgery in connection with this disease, except insofar as the surgeon might be called upon to deal with the dangers and disasters which inevitably would arise from such a course.

Again, why await an interval, when the clinical fact remains that operation during the first or second day of the disease is accompanied by no higher mortality than when it is performed in the interval?

These facts are fast becoming disseminated amongst the public and the time is not far distant, if it is not now here, when the medical man who does not counsel operation as soon as a diagnosis is made, will fail to hold the public's confidence and as a consequence, will find his field of public influence much curtailed.

How then shall we treat appendicitis when the diagnosis has been made? We should recognize at the outset that the disease is a surgical one; that any unnecessary delay in having an operation performed for the removal of the diseased organ is attended by danger, and unless there exist contra-indications to surgical treatment, we should firmly counsel immediate operation.

While the preparation is being made to get the patient in the best and safest environment for the operation it will be necessary to reduce pain and to protect him against harmful feeding and more harmful medication. These two later duties are often no light task.

The pain, which is usually not severe, may be relieved by applications of heat or cold applied over the site of distress. The ice-bag or the hot-water bottle probably have no effect

upon the course of the diseased. If the pain be severe, and especially if the patient is to be transported some distance, a small dose of morphin may be judiciously administered.

Food should be withheld for two good reasons. The first is, the patient does not desire it or require it and it is doubtful if it will be assimilated. The second is, that undesirable peristalsis follows its ingestion. Water, however, may be given freely, unless there be nausea, when even it should be withheld. *Purgatives* should not be administered.

The practice of giving some active purgative for every pain in the belly has so long existed that it is the first thought of the layman and too often the resort of the physician when the symptoms of appendicitis manifest themselves.

Such medication produces one of two things, and usually both. First. It increases the peristalsis, when the muscular action of the intestine is already too great, as proven by the cramp-like pain of which the patient complains. Second. It causes an outflow of fluid into a viscus already overfilled as a result of the inflammatory process.

It must not be forgotten that the appendix is a part of the gut and differs but little in its anatomical peculiarities from other portions of the intestine; hence a purgative will produce the conditions in it that it would in a coil of small intestine. All are agreed that in obstruction of the bowel, a purgative can only do harm, and I unhesitatingly state a purgative is not indicated in any case of cramps in the belly.

The chief reason that is advanced for the administration of a purgative is that it may aid drainage from the appendix. How can it do this? Surely the secretions or fecal matter found in the appendix in appendicitis are not crowded into it by an overfilled caecum. In the hundreds of cases upon which I have operated I have not found this to be the condition in a single instance.

It is a clinical fact that the caecum is usually empty, and if distended, it is with gas. Hence there is in the caecum no barrier to drainage from the inflamed appendix.

What the purgative really does to the appendix is to intensify its wave-like contractions and increase the contents of its already overfilled lumen. In no case does it do any good, and in many it may do much harm.

An enema, repeated if necessary, is of value and often gives comfort. It will unload the large bowel and the contents of the small intestine being fluid, may be expected to flow through the ileo-cecal valve into the emptied large bowel without undue peristalsis.

Appendectomy constitutes the rest of the treatment.

To recapitulate: When a diagnosis of appendicitis has been made, our efforts at treatment should be:

First. To relieve pain.

Second. To keep the stomach empty of food.

Third. To prevent the administration of purgatives.

Fourth. To empty the colon by a not too large or forcibly administered enema.

Fifth. To operate upon the inflamed viscus as soon as possible after the diagnosis has been made.

DISCUSSION.

DR. E. H. BAIRD, Dyersburg: I would like to speak of one or two points that have been brought out by the essayist and to emphasize them, and one in particular—early operation in cases of appendicitis. I think that when a patient has local pain and nausea and rigidity, with elevation of temperature, and leucocytosis, the time to operate is now. If there is not a suitable place where the patient can be operated on at home, the patient should be transferred to a hospital, placed in Fowler's position en route, and the use of morphine as advocated by the speaker, and if you have a beginning peritonitis, the old Clark treatment of opium can be used in place of morphine.

Enemas must be used with caution in appendicitis, and in this connection I would like to relate an experience I had two years ago.

A patient was taken to the hospital and given an enema, a low enema, less than a quart, the enema was not returned from the bowel, and immediately a diagnosis was made of a probable rupture of the appendix. The patient was taken to the operating table and upon opening up the peritoneum water spurted out. On further opening up I found that the enema with the fecal contents had come out through the rupture of the appendix. I do not believe in flushing out the abdominal cavity following pus cases, but I do believe in gently wiping out the parts. But in this case as long as we had irrigation from the inside of the bowel, I thought I would irrigate from the outside. I turned the patient over sidewise and put four or five gallons of saline solution in the abdomen, washed out the con-

tents as well as I could, and closed down to the point of drainage, and luckily for the patient and for me, recovery ensued.

DR. L. E. BURCH, Nashville: Dr. McGannon has contributed a very valuable article on a most important subject, and his views, to my mind, are eminently correct. Appendicitis is no longer a medical disease. There is a medical treatment of appendicitis, and a very important one, but we no longer consider it a medical disease.

Let us take Dr. McGannon's statistics and we find they are very illuminating. All of his cases that were operated in the first twenty-four or first forty-eight hours recovered. When he operated on cases that came on the fourth, the fifth and the sixth day, this time the operation was attended with danger. Now, what do these conditions show? They show this, and Dr. McGannon has emphasized it especially, that the time to operate on appendicitis is during the first twenty-four or first forty-eight hours. Do not carry the case to the interval. No man knows from the symptoms of appendicitis what is going to happen in that case. He cannot tell. Not infrequently physicians say to a patient, "If we can carry you through this attack, you can be operated in the interval and you will be perfectly safe." That may or may not be true. Your patient may have a normal pulse, a normal temperature, his abdomen may be flat, and yet within the next twenty-four hours he may be in a dying condition. Therefore, after the diagnosis is made, and it should be made early, an immediate operation should be performed. That is very important.

In regard to the diagnosis of appendicitis, usually the symptoms are clean-cut and well-defined. In some few cases the symptoms are quite obscure and it is impossible, or, at least, a difficult problem to make a diagnosis. In all intra-abdominal conditions, the gall-bladder, kidney, ulcer, whatever it may be, we usually have first the symptom of pain and then a reflex vomiting. When the vomiting comes first and pain afterwards, as a rule, you can eliminate appendicitis, the gall-bladder or kidney. In those conditions you have the pain first, then afterwards you have the reflex nausea and the reflex vomiting. It is impossible in many cases of appendicitis to get localized tenderness or rigidity at McBurney's point until the end of the first eighteen hours or twenty-four hours, and for that reason in some cases it is impossible to make a diagnosis in the first twenty-four hours. That brings up another important point, and that is, do not give morphine until you have made a diagnosis. After you have made the diagnosis use morphine. The proper thing to do is to operate on the patient at once. Sometimes the conditions are such as to render it impossible to carry out an operation at once. In other cases you cannot get

the family to consent. I operated on a case this morning of twelve days' standing. The people would not consent until the patient was almost in a moribund condition. As a rule, if you take the position and say positively the patient must be operated on, they will consent, but by all means make the diagnosis first and then give the morphine.

Crile has contributed in the last issue of the *Journal of Surgery, Gynecology and Obstetrics*, a very valuable article on the kinetic theory of treatment of appendicitis, and he lays special stress on two points; that is, after you have made your diagnosis in these bad cases where peritonitis is present, the treatment, until they are operated on, is the use of morphine. The object of morphine, of course, is to keep the bowels quiet and to give the patients plenty of water by the Murphy drip. An ice-bag has some little effect. Dr. McGannon does not think it is of much value. It is of a little value. It splints the intestine and keeps it from moving—borygmi.

DR. F. B. REAGOR, Shelbyville: As a general practitioner I rise to emphasize the point that appendicitis is not a medical disease, and we as general practitioners make a mistake in attempting to cure a case of appendicitis by medicinal means. It makes the patient and his friends think that operation may not be necessary. If we give them the impression that the disease can be treated medically and without surgery, if we should urge operation they will say at once that Dr. A. or B. is curing these cases without a surgical operation, and if they should get over the attack they think they will not have another one, but we know that one attack of appendicitis generally leads to another. We are unable to say whether it really ever gets well entirely. What will you do with a patient who refuses to be operated on, even after you have pointed out to him the importance of operation? One gentleman told me who was suffering from appendicitis, when I advised operation, this: "Let the hide and tallow go together." What are you going to do with these patients? When we are called to see and to treat a case of appendicitis by medicinal means, we should advise the patient to take the safer course, and that is to undergo an operation. Another point we must impress upon patients is that they should be operated on not in the first two days after the diagnosis has been made, but as soon as diagnosis is made. I believe the time to operate on a case of appendicitis is as soon as we make the diagnosis, if we can get the patient to agree to it. No man, be he ever so clever, can tell what is going to happen in an appendix in the first twenty-four hours or the next two or even five hours. If we impress upon people the importance of appendicitis being a surgical disease, and can get them to realize that surgery is absolutely necessary, we will get more of these cases for operation. I, for one, believe that there is

really no medicinal treatment for this disease, and in giving purgatives and attempting to cure appendicitis by any means we do more harm than good. The points I have mentioned should be emphasized and impressed upon the people generally, and if this is done I believe more of them will consent to operation than is the case at the present time. The putting off for interval operation has cost many valuable lives.

DR. K. S. HOWLETT, Franklin: I feel that there are two or three points in Dr. McGannon's paper that are very valuable to the general practitioner that should be emphasized and made more impressive, and perhaps I can best do this by reiterating them. One of these points is that purgation is not the treatment for every pain in the abdomen. We general practitioners have been taught for a long time that the thing to do, when a patient comes to us complaining of pain in the belly, even though the pain be over the appendix, was to purge him, and if the condition was not relieved, to take him to a surgeon. It is well to have it impressed upon us, as the doctor mentioned, that purgation is not a safe remedy in these cases, and purgation, like Dr. Burch says about morphin, should not be used until that diagnosis is made.

In regard to the use of morphin, oftentimes we should not give morphin after the diagnosis is made.

I recall one case in which the patient was undressed and put to bed after I was called to see him. He did not want to acknowledge he was sick or ought to go to bed. When I made a diagnosis of appendicitis it was received with doubt by the family and absolutely rejected by the patient himself. When he was put to bed he asked me if I was not going to give him something to relieve the pain. I refused to do so, and if I had done so that man would not have been operated on that day or as long as the effect of the morphin lasted. The fact that I refused to give him morphin to relieve him made him consent to be operated on. I believe the fact that I refused to give him morphin saved his life.

Another patient lost his life because I gave morphin. A diagnosis was made of appendicitis. I had him on the train ready to bring to Nashville for operation, and on account of the severity of the pain I gave him a hypodermic injection of morphin. He was brought to the City Hospital, two physicians saw him with me. The symptoms were masked by the morphin. His pain was gone, the rigidity was less, he felt much better, his temperature had actually dropped, and so the two physicians who saw him with me, one of whom was a surgeon, did not agree that an operation should be done at that time. It was postponed, and the next morning when a surgeon called he pronounced the case hopeless. Operation was not done, and he died of peritonitis. We should know our patients before we give them morphin.

Another point is the attending physician should take on himself the whole responsibility in advising operation. Too often have I seen the general practitioner advise in a half-hearted way that an operation be done. The family refuses, and when the time comes, when it seems that operation should have been done he shifts the responsibility upon the family. He should not only advise operation, but this advice should be given forcibly and firmly and not compromisingly. When a general practitioner makes a diagnosis of appendicitis he should not compromise in anyway with the prejudices or wishes of his patient.

DR. C. N. COWDEN, Nashville: The question of the treatment of appendicitis has been fought out all the way along for the last five or ten years and was considered purely from a medical standpoint until up to the present time, when it is now admitted by all to be a surgical disease. Anyone who departs from the first hour of operation after the diagnosis is made will reap peritonitis and a harvest of deaths. That was a dictum placed in the literature by the late Dr. Price, whose statistics in the treatment of peritonitis, and especially of appendicitis, have never been equalled by any other man in the United States. Not only the doctor himself believes that today, but the laity also. The moment we make a diagnosis of appendicitis today, the average layman is ready for early operation. The people are beginning to recognize the benefit and good of early operative interference. But the thing I want to stress more than anything else is the administration of purgatives. Before next Saturday some surgeon will operate on a patient who is sent to him by some general practitioner who has given this patient purgatives from beginning to end. I have seen in less than a week after meetings of this character have come to a close patients brought to the City of Nashville by physicians who have given them purgatives *ad libitum*. They think they have done a great deal to relieve the patient. If we believe that let us practice it. If we believe a purgative is harmful, when we go home, let us stick to it and not give it. The trouble is the average doctor is not satisfied with his diagnosis and many times we are not called in time to operate, or during the first twenty-four hours, simply because the doctor is not satisfied either with his examination or his diagnosis. He is afraid it will be something else. I believe if we take the train of symptoms insisted upon by Murphy, we would never be far wrong. I want to submit to you this question: Have any of you ever operated on a patient so early that you regretted it? Have any of you operated on a patient and regretted that the operation was done too late? I have never seen a patient operated on too early in appendicitis. I have seen them operated on too late many a time.

One other point: If we wait until we have elevation of temperature in these cases we are sometimes going to be misled. There is not any one

symptom we can pin our faith to and make a diagnosis, but in the first ten or twelve hours if you will observe the patient closely, you will get a train of symptoms—pain, vomiting, rigidity, and localized tenderness. I am not like Dr. Burch, I believe we do have in nearly every case during the first twenty-four hours localized tenderness over the region of the appendix; and I believe morphin in Dr. Howlett's case had nothing to do with that patient. His patient undoubtedly had a perforation; he had a diminution in temperature, and the morphin had nothing to do with it at all. He perhaps did not get the full effect of it. We have seen patients many times with perforations, patients suffering with agonizing pain, entirely relieved. Tension was immediately taken off in that case and the patient had immediate relief. A point I would insist upon more than anything else is that whenever you see such a train of symptoms make your diagnosis of appendicitis, and then disprove it, instead of calling it everything else except appendicitis, and I believe the mortality will be greatly reduced.

DR. WILLIAM O. SULLIVAN, Newbern: There is one point I did not hear Dr. McGannon call attention to and that is the transportation of patients with appendicitis for operation. I have had quite a good deal of experience in this regard and have had patients transported ninety or one hundred miles for operation, and I must say that I have not seen any ill results from that practice to any patient in any stage of the disease. You can give them some morphin to allay pain.

As a general practitioner, I have had considerable experience personally and afterwards with cases of appendicitis. If any of you should have a patient with pain in the abdomen, do not be afraid to send for a surgeon whether you know what is the matter with the patient or not. Get him there for an immediate operation, and, if necessary, make an exploratory incision. But always get these patients to a surgeon is my advice to country practitioners.

DR. MCGANNON (closing): It is very gratifying to see the unanimity with which the particular points that I have tried to outline have been accepted and agreed to. It was only a year ago when a subject somewhat similar to this was presented to the Association and there was a great deal of argument pro and against as to whether the very things I have now insisted upon were correct or not. It speaks well for the recognition by the general practitioner of the facts that have been presented. I believe the public will be educated to try it.

I want to refer to a few points brought out in this discussion.

In regard to the case of Dr. Baird in which he unfortunately had the water pass up through the colon and escape through a perforation in the appendix, that would be an extremely unusual thing. I have found by experimentation that it requires about four to six pounds of pressure to force an enema through the colon and out of the appendix.

I have tried it in a number of cases in which I have done appendicostomy for one condition or another. A small amount of fluid in the form of an enema, probably a pint or more, given judiciously, I have never seen cause any distress, and in many instances it has relieved the gas and the distention. It gives the patient great comfort and certainly tends to unload the bowel.

In regard to the use of morphin. Dr. Howlett struck the keynote when he said it masks the symptoms and makes the patient insist on not having an operation done, when the general practitioner knows it should be done. That is a very great objection to the use of morphin. The use of morphin does not change the character of the disease nor limit it nor increase it. An ice bag does give relief from pain. A hot water bag does the same thing, is comfortable and grateful to the patient, and it ought to be used. Neither heat nor cold makes any difference in the progress of the disease itself. It does give comfort and relieves pain and makes morphin unnecessary, and where the diseased appendix lies against the abdominal wall, you will find an ice bag or hot water bag will not be sufficient to relieve pain. An ice bag or hot water bag, if applied over the site of the disease, if the appendix is lying against the anterior wall, may increase the pain because the inflamed appendix is being pushed against the sensitive lining of the abdominal wall; may increase it on account of the position of the appendix under these circumstances.

Dr. Reagor brought forward a very important question, namely, what are we going to do for those cases that refuse operation and when your neighboring practitioner is said to be curing them with medical treatment and states they do not require surgery? There is one thing to do, gentlemen, and that is to tell the patient the truth in no uncertain terms. Tell him he is playing with his own life and you are not responsible for it. Tell him the mortality there is from 8 to 15 per cent in such cases as his without operation, and that if he wishes to take a suicidal course, tell him that it is his life and not yours; that you want to treat him in the proper way, but you have no power either to stay this disease or to limit it. If then he still insists that there should be no operation done, there is nothing else for you to do. But if you will place the facts before him in a sufficiently clear manner, the chances are you will find very few indeed who will hesitate very much about operation.

I wish to be clearly and distinctly understood that the time to operate is when the diagnosis is made. In this regard Dr. Reagor seems to have misunderstood what I have said. I did not have reference particularly to the first or second day, but the time when the diagnosis is made is the time to operate.

NORMAL LABOR.*

By John Roberts, M.D.,
Kingston.

My attempt to discuss this age-old subject is not to call your attention to anything "new under the sun," but rather to point out the fact that normal labor is scarcely ever normal, and make the assertion that something is responsible for this state of affairs. Labor, according to Hirst, is that natural process by which the female expels from her uterus and vagina the ovum at its period of full maturity, which is reached, on an average, 280 days after the first day of the last menstruation.

Normal labor should be brought about by the unaided efforts of the mother, and if ideal, should be almost as free from discomfort as the expulsion of any excreta of the body.

After the first world tragedy in Eden, God said to the woman: "I will greatly multiply thy sorrows and thy conception. In sorrow thou shalt bring forth children." In sorrow, not in pain, not in agony. The pain and inconvenience incident to so-called normal labor are due to the fact that the laws of nature have been flagrantly violated, and the natural processes so perverted that the organs of the female no longer perform their natural functions.

At some remote period in the history of the world, when the prospective mother felt a desire to evacuate her womb, and straightway did so, (with about as much effort as the present-day female accomplishes her bi-weekly or weekly bowel evacuation) some one invented a mirror, or at least some means of allowing people to see their reflections, and from that hour began the degeneration of physical humanity.

From that day the female has been trying to appear beautiful and attractive to the male, and with such success that the male brute has been trying to please her in every possible way. So when the hour of the prospective mother came, the husband sought in every possible way to help her and make her comfortable. Later on he began to call in the neighbors and

*Read before the Roane County Medical Society.

they all "helped" her, and later still, some neighbor began to specialize in "helping" women have babies, and hence became the first obstetrician, and through all the years since he or she has been partly responsible for "normal labor" as we now see it.

Faulty modes of living, modes which have disregarded nature's laws, have helped to enhance the difficulty.

For years women have been substituting artificial abdominal walls, to take the place of muscles which nature gave them, and as a result, when the strong contractions of the abdominal muscles necessary to assist in the expulsion of the contents of the gravid uterus are called for, those muscles do not respond, because they have been allowed to degenerate and become weak from disuse.

The habits of the early life of growing girls should be such as to develop large, roomy pelvises. This condition can be brought about only by plenty of bodily exercise, such as walking, running and such other movements as bring into constant use those bones and muscles which go into the construction of the female pelvis. But I am beginning to be specific, the very thing I wish to avoid, in this paper.

I wish to speak of those large general principles, which affect not so much the individual as the race. If we as physicians are not going to be like the children in "Enoch Arden," "Daily leaving little footprints, daily washed away," we must unlearn many things ourselves and teach the human race to unlearn many things. We must teach the women of our day and generation to find their way painfully back to the physical perfection of the savage mother, who dropped out of the line of march of her tribe long enough to be delivered of her off-spring and then, taking up the young savage, followed and overtook her people.

If we are to help save the human race from extinction we must teach women that they are child-bearing animals, and that the crowning glory of woman is wifehood and motherhood, and that the Creator intended that a certain portion of their lives be devoted to bringing forth and rearing children. If we bring women to see and believe this as a fact, then the mass of city women will cease to be unable

to have children, unless they have instruments to deliver them and wet nurses to suckle their babies. We find a striking analogy in the high-bred race mare unable to suckle her foal after she has with difficulty borne it, because she has been bred and trained for speed. How vast the difference in her and the great all-purpose mare, able to suckle not only her own foal, but that of the race mare also.

Let us teach women that if they would be truly beautiful they must be useful. Teach them that every muscle of the body has a function, and must be developed and trained. That to be beautiful they must not only have rosy cheeks and be able to make goo-goo eyes, but must be able to walk ten miles, if necessary, and must have broad hips and broad chest. That they must be able to stand flat footed and touch the floor with the tips of their fingers without bending their knees, and be able to lie flat upon their back, and with the toes under some projection, raise themselves slowly to a sitting position, without the help of their hands. Teach them to care for their teeth, not only that they may be able to dazzle some festive awain with their seductive smile, but that they may also be able to masticate meat and bread to nourish their bodies. Teach them to care for their skin, not by filling up their sweat glands with cosmetics, but by bathing and massage. That God's sunshine and fresh air in liberal doses will do them more good than all the tonics they can swallow in a life-time, and that fresh air breathed through lace curtains is not by any means so healthful and health giving as when sought upon its native heath. Teach them that their feet were made, primarily, for locomotion, and in order to be useful, as well as ornamental, they must have room to grow and be encased in shoes, not only large enough for comfort, but thick enough to keep out hook-worms. Teach mothers that it is their duty to train their girls, not only to be good and beautiful, but to be useful, not only in the domestic sense, but in fulfilling the great purpose for which they were created.

Our great opportunity as obstetricians, however, is found in the prospective mother. We should teach her to observe all those laws of health which will bring her to a normal labor.

Teach her that motherhood is such a beautiful, such a sublime thing that the women of God's chosen people prayed for it, offered burnt sacrifices for it, and felt that they were under a curse if they remained barren, and rejoiced very greatly when they believed their prayers answered, and felt the movements indicating life in their wombs.

Teach her that while a corset may give symmetry and style to the wearer, that as usually worn they in a large measure take the place of the abdominal muscles and invite degeneration and atrophy of those very muscles which, during labor, play such a conspicuous part in the process, and every obstetrician is ready to testify how badly those muscles are needed and how sometimes we are forced to pin a folded sheet tightly around the laboring woman to reinforce those same lazy, atrophied muscles.

Teach her that the heart should be kept strong by constant exercise, for God only knows how much work it will be called upon to do during labor. Teach her that her lungs must be kept strong and free to expand to furnish the life-giving oxygen, not only for herself, but also for another yet unborn being, whose beauty and talent may make the world glad, or whose valor may cause monarchs to tremble, or whose eloquence may shape the destinies of nations.

Teach her to live, and act, and think, as though she were not pregnant, in the sense that she must have plenty of bodily exercise, sleep and recreation. By again reverting to observation of the lower animals we will see how they ignore their pregnant state until nature calls them to an unpremeditated confinement, through which they pass without the handicap of being compelled to climb a hill before they have gotten to it.

And finally, let us teach woman that she must look forward to her hour of confinement not as some horrid ordeal to be feared and evaded, but rather as to the happy culmination of the first command given to humanity by their Creator, "Be fruitful, and multiply, and replenish the earth, and subdue it."

WHAT IS THE MATTER WITH HANNAH?

By W. K. Vance, M.D.,
Bristol.

President's Address Southwest Virginia Medical Society at Bristol, December, 1915.

The proverbial clap of thunder from a clear sky could not have been more surprising than my election to the honorable position of President of this Society at its last meeting. I, of course, could not but feel surprised to have been thus honored above older and more worthy members. To say that I fail to appreciate the compliment, even though the honor was not sought or expected, would be to convict myself of the rankest ingratitude.

Of the many subjects which have obtruded on my mind as fit pabulum for this occasion, it has been difficult for me to make a choice. After mature reflection, however, I have decided to follow the example of our brethren in the ministry, select a text and then scatter around any way that seemeth to me good and proper.

You will find this text recorded in Chapter second, Article first, Sections first and third of the Code of Ethics of the American Medical Association, which read as follows: "Every one on entering the profession, and thereby becoming entitled to full professional fellowship, incurs an obligation to uphold its dignity and honor, to exalt its standing and extend the bounds of its usefulness." "Every physician should identify himself with the organized body of the profession as represented in the community in which he resides."

In view of the almost moribund condition of this society a few months since, I do not think that we can for a short time consider a subject of greater importance than that suggested by the quotations made.

It does not require an expert diagnostician to determine that the body medical in this beautiful section of country is in a debilitated condition and in need of scientific treatment. The same remark is applicable to our country as a whole. This is proven not only by superficial observation, but is clinched by carefully kept statistics.

According to most recent statistics, there

are in the United States 142,332 physicians eligible for membership in their County Medical Societies and the American Medical Association. On May 1, 1915, there were, according to the report of Secretary of said Association, but 42,366 bona fide fellows of our National Association—less than 30 per cent of the qualified physicians of this country.

Of the 2,420 regular physicians of the grand old state of Virginia only 634—26.3 per cent—are fellows of the A. M. A.

Tennessee, with her 3,389 qualified physicians, shows up an even worse per cent on the membership roll of the A. M. A.

The most recent report from the Secretary of the Tennessee State Medical Society shows that of the 3,389 legally qualified physicians in that state there are but 1,364, 40 per cent, members of the State Society. Think of it! 2,025 eligible physicians of my native state not in affiliation with our State Medical Society!

To the honor of Virginia it is a pleasure for me to record that of the 2,420 regular physicians registered, 1,694, about 70 per cent, are members of the State Medical Society. This is so far in excess of most of the states of the Union one cannot but suspect that the Secretary and Treasurer of the State Society are more humane than are the same functionaries in her sister states in striking delinquents from the roll, or else do not keep themselves informed as to the number who have been called to that blissful and eternal home where all good doctors, who keep themselves in good standing with their medical societies, go.

I know statistics are uninteresting, but pardon me for coming nearer home and using a few more figures as evidence of the fact that this apathy on the part of the medical profession relative to its own welfare is endemic, if not epidemic, in East Tennessee and Southwest Virginia—a country richer in natural resources and more beautiful naturally than any other on the face of the earth. There are so few counties organized in this territory perhaps the best index as to the indifference of physicians relative to an organized profession is to be gotten at by the lack of interest taken in the East Tennessee and Southwest Virginia Medical Societies.

According to the most reliable information obtainable there are about 950 eligible physi-

cians in East Tennessee. Out of this number 150 are in good standing in the East Tennessee Medical Society.

I have not been able to ascertain accurately the number of physicians in Southwest Virginia. As near as I can approximate it, there are about 650. The number in this society, according to information furnished recently by our Secretary, is 117. In other words, there are 800 physicians in East Tennessee and 533 in Southwest Virginia who, for reasons best known to themselves, are recreant to the duty imposed upon them by the code of ethics.

Perhaps the fewer statistics I give of Washington County, Virginia; Sullivan County, Tennessee, and the city of Bristol, the less I will offend local pride. Notwithstanding we have as fine a body of physicians in this territory as can be found elsewhere, candor forces me to confess that we are sinners of the vilest type so far as medical organization is concerned.

With such a condition confronting us all over our beloved country it is sufficient to cause one to ask in vulgar vernacular, "What is the matter with Hannah?" Why does this paradoxical condition exist as regards the medical profession when the members of other callings have long since learned the importance of getting together in an organized capacity to discuss matters of common interest? The wonder only grows when we consider the fact that nearly every other organization of business men has as its chief object the promotion of their financial interests only. While this is one object of medical organization, it is a minor consideration. The chief incentive which actuates every physician in spending time and money attending medical meetings is that he may thereby be better qualified to skillfully treat the various ailments of those who seek his services, and the better able to teach them hygienic measures and the art of keeping themselves well. Surely no body of men has ever been or ever can be influenced by more philanthropic motives.

But returning to my text and paraphrasing the salient points suggested therein, I wish to say that there are three cogent reasons why every honorable physician should be identified with a legally organized medical society:

- (1) It is a duty he owes himself.
- (2) It is a duty he owes his profession.

(3) It is a duty he owes humanity.

There is no more honorable or beneficent calling than the practice of medicine, and, as my text well says, "Every one entering it incurs an obligation to uphold its dignity and honor, exalt its standing and extend the bounds of its usefulness."

I believe it was the immortal Scotch poet, Robert Burns, who somewhere in his prose writings said, "I would rather have it said that my profession borrows credit from me than that I borrow credit from my profession." Would that that was the motto of every member of the medical profession. If that principle was inculcated in the mind of everyone beginning the practice of medicine we would hear no more of moribund or defunct medical societies or of an unorganized medical profession.

When properly conducted, medical societies are post-graduate schools for busy practitioners, as well as social clubs, enabling them not only to keep abreast of the many advances in their profession by learning from the experiences of their fellows, but they also give an opportunity for recreation and social enjoyment, thereby enabling one to *know* his acquaintances in the profession. Such an intimacy is always productive of good. Much of the prejudice and feeling of animosity too frequently met with, I regret to say, among doctors is the result of not knowing each other more intimately. It is generally the case that two physicians with a dislike for each other if intimately associated in a medical society, each will find that he has done the other an injustice in harboring unkind feelings, usually resulting from the tattling tongue of some busybody. While I cannot gainsay the old adage: "There are black sheep in every flock," I am candidly of the opinion, taking them altogether, you will find in no profession or calling fewer ebony descendants of Mary's little lamb than in the medical profession. The facts are we are "*the* best people on earth," and I am quite sure the beautiful panegyric the Kentucky colonel made on whiskey could be more truthfully said in eulogy of doctors, provided they are of that class that "bring credit to their profession."

When God said unto Adam in the Garden of Eden, "It is not good for man to live

alone," He enunciated a truth that is almost equally applicable to members of our profession in this day and time, for it is hard to conceive of a specimen of the genus homo who is more in need of commiseration than the doctor who isolates himself from his professional brethren. That there are many such we know, but it matters not what flimsy excuse induces them to pursue this course—they are their own worst enemies. It matters not how proficient they were in college, or how well qualified they were theoretically to enter the practice of medicine when they graduated, they can never rise above the mediocre outside the pale of medical societies. There alone they come in intimate contact with the busiest and most competent members of their profession and acquire from them more information and practical knowledge than any medical college can impart. Osler has well said: "Medical societies are the life of the profession, help to keep a man up to the times and enable him to furnish his mental shop with the latest wares." No doctor liveth to himself without becoming provincial and narrow in his views and a laggard in the profession.

It has been the writer's privilege and pleasure during the past several months to aid in the organization of a County Medical Society in the good old county of Sullivan and city of Bristol, Tennessee. Little trouble in this laudable work was anticipated, but very great trouble was experienced, in consequence of the apathy, indifference and, I regret to say, hostility of certain members of the regular profession. This statement is not made for the purpose of censuring anyone, but purely for the purpose of giving the facts. After months of earnest endeavor on the part of my associates and myself we had enrolled less than 25 per cent of the physicians of Sullivan County. The counties of Carter and Johnson not being organized, the physicians there kindly offered to join in with us, which offer was gladly accepted and the name accordingly changed to the Sullivan, Carter and Johnson County Medical Society. I now wish to express publicly my high admiration for the profession of these two counties. Practically every qualified physician in Johnson and quite a number in Carter have joined in with us, and I am very much gratified to state that, with two

exceptions, we now have the largest medical society in East Tennessee and the future for it looks very bright.

In order to show the various excuses given for not joining a medical society, I will mention personal experiences I had in soliciting physicians to join in with us.

Two would not give me their applications for the reason that there were one or more members in the society they did not like. One considered himself too old. One contemplated going into a business, as a side issue, not permitted by the code of ethics, while another one could not afford to close his office long enough to attend the meetings for fear he might lose a patient. One hesitated on account of the expense, and another modestly confessed that he felt his incompetency to prepare a paper that would reflect credit on himself or be instructive to those who heard it.

The sad part of this matter is that these parties are not the riff raff of the profession, but men in good standing, capable of rendering valuable service in advancing the best interests of themselves and their profession if they could be brought to see their duty. It is incomprehensible to me why men of their caliber could be influenced by such flimsy excuses. To be consistent, the two who refused for the reason that there were obnoxious members in the society should withdraw from the Democratic party and the order of Elks, as they are all identified with those orders.

After giving much study to the real explanation of so many members of the medical profession holding themselves aloof from medical societies, I am conscientiously of the opinion that pecuniary considerations actuate the majority of them. Some are influenced by the eight or ten dollars it will require annually to hold membership in the county, state, and national organizations. Others are concerned more about the pecuniary loss it will mean to absent themselves from their offices while attending the meetings. Another class consider with dismay the pecuniary sacrifice it will be to them to cease affiliation with the disreputable element in their communities.

If such physicians could see themselves as others see them they would realize that they occupy no higher place in the estimation of un-

prejudiced persons than do those members of the church who except to go to heaven on flowery beds of ease, but who habitually absent themselves from church services, and are so infernally stingy that they never contribute a cent to their pastor's salary or the church benevolences.

Among all these objectors we should enter for the modest doctor, who imagined himself incompetent, the highest regard. There are many high-toned and honorable physicians, located as a rule in the rural sections of our country, who are not in affiliation with the organized body of the profession for the reason above mentioned. I have in mind now two of the most ethical, unostentatious and unusually well qualified members of the profession who have, perhaps, never attended a medical meeting in their lives. To see these men and judge of them by the clothes they wear you would likely conclude that they estimate their abilities correctly. To meet them in consultation, however, and ascertain how well they are informed upon all things pertaining to medicine and surgery one is forced to entertain for them a profound regard and high admiration. They are diamonds in the rough and all that is necessary to cause them to sparkle and scintillate in the medical world is a little polishing by attrition with other members of their profession. There are thousands of such in our country. They need the help of medical societies and medical societies need the inspiration and information to be gotten from them. Once enlisted in the uplift of medicine they will travel farther and attend meetings more regularly than any class of doctors on earth. It is our duty to go out and hunt up these lost sheep and bring them into the fold.

I am now quite sure you will with one accord agree with me that every honorable member of the profession owes it to himself to be a member of his county and state societies, as well as the American Medical Association. But his duty does not end here, for there are many physicians thus affiliated who are not worth a picayune for the reason that they do not attend the meetings at all, or if so, are never on time. Knowing a week and usually a month in advance the time and place of the next meeting, every physician can arrange his

work so as to be present promptly on time if he so desires, barring occasional emergency cases.

Having been a close observer for years I am of the opinion that tardy attendance on the part of members has sounded the death knell of as many medical societies as non-attendance. Every doctor should be a gentleman, but this conduct is not gentlemanly. Failure to meet promptly a consultation engagement with one physician has always been regarded a breach of medical etiquette. Surely this offense is not minimized when duty calls you to meet a dozen or more reputable members of your profession in society assembled to consult on the subject for consideration for the evening, and you fail for any reason not altogether unavoidable to promptly meet this engagement.

We come now to the consideration of our second proposition, to-wit, the duty we each owe our profession.

It would be an unnecessary waste of time for me, to such a gathering, to dilate upon the debt of gratitude the world owes our profession for its humanitarian and philanthropic work in the alleviation of human suffering, the prolongation of human life and the eradication of diseases from the world. The history of scientific medicine is wreathed with a halo of glory unsurpassed by any other species of human endeavor. Where in the world can be found a profession or business association of any kind every honorable member of which is giving freely to the world, for the sake of suffering humanity, everything which he invents or discovers for the prevention of disease, or which his experience teaches him is "for the healing of the nations?" This is an army fighting for the good of the human race, under whose banners should be enlisted every physician and civilian who places personal honor and the welfare of humanity above pelf and profit.

Arrayed against this army and engaged in a war that has existed from time immemorial, and likely to continue until legislators find it is policy to give protection to a long suffering people, is an army of pirates composed of quacks, sectarians, patent medicine men, unethical druggists and mountebanks of every description, many of whom become immensely wealthy, for the reason that their only ambi-

tion is to make money. They thrive and grow fat on the afflictions and credulity of their fellowman as long as his money lasts, and then the poor sufferer is forced to throw himself upon the charity of the regular medical profession, usually a physical wreck from the neglect of proper treatment.

As aiders and abettors to this army, I say with deep regret, are to be found graduates of reputable medical colleges, physicians who for some flimsy pretext or another refuse to align themselves with an organized profession. They believe they can make capital with the rabble and promote their own selfish ends by maligning the noble profession to which they are a disgrace and villifying members of it who are in every way their superiors. These are the reprobates who do more than all other influences combined in thwarting needed legislation and preventing scientific medicine obtaining the exalted position it deserves, and will eventually attain, in the confidence of the people. They are spies and bushwhackers in military parlance and richly merit the penalty always inflicted upon such characters by courts martial.

That an army of such character should have adherents and defenders, in this enlightened period of the twentieth century, among the people upon whom they prey is anomalous, but nevertheless a fact. Why, the good Lord only knows. For them we can only, in deep humility, repeat the last prayer of a dying Savior, "Father, forgive them; they know not what they do."

Perhaps the history of the world presents no better illustration of the effectiveness of unity of action and organization than Germany in the unfortunate war now raging in Europe. Whatever our sympathies may be in this terrible conflict, we cannot but admire the preparedness of this little empire to resist the onslaughts of her formidable enemies. So well organized were her military forces that within twenty-four hours after the tocsin of war sounded she was able to mobilize hundreds of thousands of well drilled and accoutred soldiers. The time has arrived in the history of our profession for us to learn a lesson from Germany. Every honorable physician owes a duty to his profession which can never be liquidated if the same indifference and supineness

of the past and present is to characterize us in the future. The best interests of our profession and the welfare of our race demands that "every man do his duty" in vanquishing the foes that confront us. This can only be accomplished by uniting in one harmonious army, stop our own bickerings and present a united front to our common enemies. We must teach our own rank and file that the indiscreet and unkind remarks too often made by one physician relative to another brings not only the one making them, but the whole profession into disrepute with all sensible people who hear them. Follow the example of the Germans, fight the enemy and not each other.

As a profession we have ever been and still are derelict in our duty in not educating the laity to a knowledge of the fact that they owe the regular medical profession sincere gratitude for every remedial measure that has stood the test of experience, every means of ameliorating physical pain, and every measure that has contributed to the prevention of disease and the prolongation of their lives.

Teach them that there never has been and never will be but one science and art of medicine and that the various medical sects that have arisen, founded on any but the scientific facts taught in rational medicine, are as inimical to their lives and physical welfare, as are the various so-called religious sects, who ignore the plan of salvation taught in the Bible, inimical to their soul's welfare.

We should also teach them that the great army of scientific physicians are not sectarians and that no sectarian or quack is in possession of knowledge and means of administering successfully to their physical or mental ailments which have not been gotten from us. The followers of the cults above hinted at have long tried to bring us down to their own level by applying to us a resictive name as opprobrious as the one selected for themselves. Coming from them its is a vile slander to be called an allopath, but coming from a physician, as I have on a few occasions heard it, it denotes an abject state of ignorance that warrants his murder on the spot.

Remember then that united we can stand and accomplish much for the uplift of our profession and the good of the human race. Divided we will fail to measure up to this high

standard in the future, as has been the case in the past. The greatest desideratum in this country today is an old-fashioned revival along medical lines. Oh! that some Moody or Billy Sunday would arise in the medical world capable of making us see our sins of omission and commission, get all the sinners on their knees at the mourner's bench and open our eyes to the duty imposed upon us in our text. Not only do we need an army of new converts in our ranks, but backsliders must be reclaimed by the thousands before a medical millennium arrives.

From the foregoing, the duty we owe humanity, and especially our clientele, in keeping abreast of the many advances going on in the science and art of practice follows as a corrolary.

No profession is confronted with so many problems for solution. It is a progressive science and many dogmas which were orthodox a few years ago are quite heterodox today. Never in the history of the world has there been as large an army of enthusiastic workers in the field of medicine as there are at the present time, and the "transition from old to new conceptions gives rise to new problems which must be solved by free discussion and interchange of ideas and experience." Nowhere can this be so effectually accomplished as in medical societies, and, as before intimated, every physician who fails to avail himself of membership in one or more will soon realize that he is rusting out from inertia and placing himself among the unburied dead prior to his demise.

The medical profession desires and deserves a representative in the official family of our President, and but for the apathy of its members and the active opposition of the forces arrayed against us it is more than probable that there would be one in President Wilson's cabinet now. The benefit that would come to the profession and the people from such an official is self evident.

The people of this country deserve and must have saner and more rational laws regulating the practice of medicine than now exist. Surely they are entitled to at least as much consideration as the lower animals. Did you ever hear of a Christian Scientist or faith curist veterinarian, or even a member of the cults who

attribute all manner of diseases to the itch mico-robe or a displaced vertebra, asking permission to try their nonsense on the horse, hog, cow or sheep? I venture that you never have and never will for the very good and sufficient reason that none of these law-makers would be willing to trust the life of his valuable horse or cow to such fakers. And yet they practically say to the people who are so dear to them—just before each election—we cannot protect you from such charlatanry for fear it may alienate some of our constituents when the next election arrives.

How long will this state of affairs continue? The answer is easy. Until the members of the regular medical profession stand together in solid phalanx and demand of our legislative bodies wiser and more drastic laws for the protection of the people. There is no more influential body of men in any community than the doctors, and when united in the great cause of the preservation of the lives and health of the people they can insure the enactment of such laws as they demand.

Another abomination to twentieth century civilization and curse to humanity, that has waxed and flourished under legal protection by the aid of disreputable newspapers and druggists is the patent medicine business. One of the greatest benefits that could possibly result from an organized profession would be the wiping out of this iniquity and the medical profession will never rise to its high responsibility as the guardians of the public health until it joins, heart and soul, in the fight against this monster evil. So far as I know, no concerted action on the part of the medical profession looking to this end has ever been made. The most encouraging sign of the times is the fact that quite a number of the most reputable publications of this country have recently inaugurated a crusade against this pernicious business, and the American Medical Association has fulminated against it in a book entitled "Nostrums and Quackery," a copy of which should find a place in every physician's office.

I do not know that I can better show up the criminality of this business than quoting a recent editorial from the Williamson County, (Tennessee) Progress. "Without doubt the greatest as well as the most useless waste of

good, hard earned, much needed dollars in Williamson County is in the purchase of patent medicines.

"The dollars thus spent are worse than wasted, because these nostrums are not only useless, but the great majority of them are positively harmful, in that they contain habit-forming drugs, the continued use of which is dangerous and hurtful.

"The greatest, as well as the most inexcusable evil, allowed by the laws of Tennessee today is the 'Commercial exploitation of the sick for the sake of pecuniary gain,' and the most conscienceless villain allowed to run at large is the man whose tainted dollars are fraudulently obtained by playing upon the suffering, the fears and ignorance of the sick.

"The highway robber as he holds up his victim, runs some risk that he will be shot, and exhibits some degree of courage; the thief who pilfers a loaf of bread, has the excuse of being hungry; the ghoul who slinks across the battlefield emptying the pockets of the wounded and the dead, at least does his victims no additional harm.

"But what can be said of the man who in order to succeed in his scheme must add deception and fraud to his other crime of robbery, adds to the ailment which he proposes to cure, and whose victims are the most helpless class of society, namely, the ignorant, the poor, the sick and afflicted, and especially weak and sickly women and children.

"It is apparent that it is the sickly women who are considered the easiest prey for these fakirs, for it is towards them is chiefly directed the plausible and false advertisements and it is their ailments which are most prominently and indecently paraded therein.

"It will, perhaps, surprise some otherwise pious and intelligent women to learn that they have been induced to habitually take "booze" in the form of patent medicines and that they have lent their names and influence towards promoting the sale of a disguised tippie; but such is a fact.

"Who are the accessories to the crime?

"First. The newspapers whose publishers are doubtless well paid for their space and influence and whose columns are filled with statements which the publisher, (if he is a man of intelligence) knows to be untrue, but is will-

ing for the filthy lucre to thus impose upon his trusting subscribers.

"Second. The druggists who allow flaming and deceptive posters to be stuck in their windows and who recommend and sell these nostrums to their friends and customers, reaping a larger profit on than they do from the sale of standard and legitimate drugs.

"Third. Legislators, who having been honored by their fellow citizens, with positions of honor and trust, are influenced in their votes by the representations of the paid attorneys of the patent medicine trust, more than by the interests of their trusting constituents at home."

Pretty strong language this is to come from a lay publication and certainly to its pecuniary disadvantage. That every honorable druggist should be with us in this fight there can be no question. Truly the druggists should be the doctor's faithful friend and ally. Hand in hand we should work in our respective callings, with a due sense of the duty we owe humanity, feeling that we are all brethren engaged in the great cause of the alleviation of human suffering, and the emancipation of our race from the thralldom of, perhaps, the greatest iniquity that afflicts a sin-cursed world.

Nothing ever written by the hand of man struck a more responsive chord in the human heart than the ever popular lines by John Howard Payne on "Home, Sweet Home." The homes of our land are the units upon which depends the perpetuity of our government, and every true lover of his country has likewise an innate love for his own home, "be it ever so humble." The love of home implanted in the hearts of the people of this country has been productive of more real patriotism than all the patriotic speeches, martial music and booming cannon shot on the Fourth of July since the close of the Revolutionary war.

So likewise should every physician who loves his profession feel towards his home or local medical society, for it is one of the units upon which rests the great superstructures, the State Societies and the American Medical Association. Without fealty to the one he can never be loyal to the others and hence will likely degenerate into a medical anarchist.

If this paper succeeds in opening the eyes of a single member of the profession to the

fact that when he became a legal practitioner of medicine he automatically inherited a very great honor as well as a very great responsibility, and imbues him with an ambition to no longer shine by reflected light, but do something to make his profession better by having been a member of it, I shall be satisfied.

TENNESSEE'S PRISON TUBERCULOSIS HOSPITAL.

The fourth day of December, 1915, will forever be a bright spot on the calendar in the history of Tennessee's penitentiary, for on that day was opened a hospital worthy the name for the benefit of prisoners who have become victims of the worst of all prison scourges—tuberculosis. No longer will these unfortunate wards be herded into a miserable excuse for a hospital where their chance for recovery was not only not improved but, on the other hand, actually lessened; no longer will convicts in the incipient stages of consumption be kept at their tasks by day and shut up in cells in the general prison by night until the deadly disease which has seized them has ravaged their bodies unopposed until hope for staying its progress is not to be entertained; no longer will convict wards of a great state who have contracted deadly disease while confined in its major penal institution be allowed to die a miserable death without due effort to prevent, or turned out upon the world with no function to perform other than to disseminate the seeds of the "white death" grown in the incubator of the state—the penitentiary. No longer will the money which can be ground out of the hopper into which convict labor is poured be the only nor the prime consideration in the conduct of Tennessee's prison system. At last the consumptive convict is to have a chance at health and life and possible useful citizenship after he has paid the price demanded by society for misdeeds of which he may have been guilty. After protracted and more or less continuous agitation by those who have known how the state has condemned to death from disease many poor convicts from whom the law could not demand more than imprisonment and toil, a tuberculosis

hospital has been built and is being well maintained at the Main Prison, and nearly one hundred convicts are under treatment.

This hospital is located in an enclosure entirely separate from that containing the prison and workshops, is of frame construction, one story, built in two wings—one for white, and one for colored inmates. Each wing is divided into two main wards with an enclosed lounging room between, and each ward has thirty-six beds. The wards are

last degree and is presided over by a matron who takes great pride in seeing to it that everything is just as it should be in the very finest of kitchens. An experienced dietitian is employed to see that the food is properly chosen and that the diet balance is properly maintained. The exterior walls are of rough plank stained brown, while the interior walls are smooth and finished in dead white. All floors are of maple. The grounds are being beautified and when this is all finished the



Tuberculosis Hospital at Main Prison.

roomy and well lighted and there are no windows, the whole open structure being screened with wire and provided with canvass curtains which can be used if needed to exclude unusual cold or wind. The entire hospital is surrounded by a porch eight feet wide. Toilets and shower baths are conveniently located. Food for white and colored patients is prepared in separate dining rooms at tables accommodating four persons each. The hospital kitchen is modern and complete to the

surroundings will be of a kind that will bring at least a measure of brightness and gladness into the lives of those for whose benefit this humane work has been undertaken.

The hospital is under the supervision of Dr. L. W. Edwards, Prison Physician, who is devoting untiring effort to make it meet fully the purpose for which it is intended. There is a vast difference between managing a hospital and managing a prison hospital, between managing a tuberculosis hospital and

a prison tuberculosis hospital. One of the greatest factors in the successful institutional treatment of tuberculosis is contentment of the patient, and a contented prisoner is one rarely found. The yearning for release from prison walls dies only when life is ended for the prisoner. Dr. Edwards and his assistants are using rare tact in dealing with the convict patients and are working out the problems confronting them in a way that insures success for this worthy enterprise. An ob-

either by the state or by charitably inclined individuals.

The benefits of hospital treatment are easily apparent when one looks over the patients in the prison hospital. There are a number who have made most wonderful improvement in the short time since the institution was opened. When a routine system has been worked out and all essential details of treatment for each separate case can be observed, this penitentiary hospital is going to be a



A Ward of the Prison Hospital.

servant visitor to the prison hospital is impressed with the zeal of the attendants, the pride exhibited in doing their work well and the interest they have in the comfort of the patients.

Some kind-hearted friend of humanity has presented a piano to the hospital and this is a source of great pleasure to the inmates. It is to be hoped that other means of entertainment will be provided for the sick prisoners,

wonderful instrument for good, not only because of what it can do for unfortunate and helpless prisoners, but also as a means for lessening the menace of consumption to the state at large.

There is much to commend, as is above indicated, in the establishment and in the plan of maintenance of the hospital, and there is little to criticise. There should be some provision made for the segregation of bed-ridden patients and there should be at least one iso-

lated room for dying patients. There should be an assistant physician required to give his whole time to the care of the tuberculosis prisoners. It is manifestly impossible for a prison physician and one assistant physician to do the medical and surgical work of an institution with hundreds of inmates and, at the same time, give proper care to a hundred consumptives. The greatest advantage to be gained through institutional treatment of tuberculosis is that it offers facilities for the study of each individual case to the end that each shall receive the treatment—medicine, rest, exercise, diet—which is indicated in every particular case. We feel sure, however, that the officers of the state who have in charge the management of prison affairs will see to it that every facility within reach will be provided for making the prison hospital effective and productive of all possible benefits to Tennessee's prisoners. These gentlemen, from the Governor down, have shown an earnest and intelligent interest in the management of the state's charitable and penal institutions and have already set on foot extensive plans for their improvement. In the building and operation of the prison tuberculosis hospital they have done a work that will establish their names on Tennessee's honor roll.

MINUTES OF THE JOHNSON CITY AND WASHINGTON COUNTY MEDICAL SOCIETY.

The Society met with Dr. Prease, as per agreement, for the February meeting, Dr. Estes, President, in the chair. Minutes of the previous session were read and approved. Those present upon roll call: Drs. Hodge, Preas, Randall, Sells, Matthews, Cass, Broyles, West, Long and Cox.

Under the head of clinical cases, Dr. Cox reported an interesting case of ptomaine poisoning in a child six years of age. Violent vomiting, constipation and excessively high temperature, followed by subnormal temperature for several days, rectal temperature registering as high as 106 F. and falling to 97 F., to again rise to high point. Seriously sick for ten days. No food for that time. Cause was supposed to be due to rais-

ins in cake. Good recovery. Dr. Randall, consultant.

Also reported case of rheumatism of long standing relieved by the use of sounds—for old stricture, due to urithritis or chronic prostatitis, not specific. Age of patient sixty years. Fine result.

Dr. Matthews reported a case of very painful abortion. The beginning symptoms resembled ruptured tubal pregnancy, there being now show of blood, as is customary. However, after several hours, under the influence of a narcotic, the case developed as an ordinary abortion. The question of impression on the circulation after rupture and hemorrhage in tubal pregnancy came up for discussion and it was evident that the pulse was not thought to be always a beacon in this class of cases.

The question of rheumatism being due to an infection from different micro-organisms affecting tonsil, antrum troubles, urethritis, gall bladder infections, appendicitis, came in for discussion.

Dr. Broyles moved that a Scientific Committee be appointed to arrange a program for the year for the Society, which prevailed. The chair appointed Dr. Sells, Cox and West to report at the next meeting, to be held on March 1st, Thursday, at the Memorial Hospital.

The members of the Society and their wives are cordially invited to meet at the Memorial Hospital, Johnson City, upon March 2, who, with invited medical guests, will be entertained after the scientific meeting of the Society.

Resolutions of thanks were extended to Dr. Preas for his courtesies at his office at the February meeting.

J. W. COX, Secretary-Treasurer.

A PRINTED PROGRAM.

The Secretary of the Sullivan-Carter-Johnson County Society has sent out a neatly printed program for 1916. The subjects are well chosen and two men are assigned for discussion of each paper. This is the third county society program we have seen for 1916. There is no doubt about the value of an arranged program—every society should have one.

THE JOURNAL

OF THE

TENNESSEE STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Tennessee

Office of Publication, 306 First National Bank Bldg., Nashville

FEBRUARY, 1916

EDITORIALS**"ILLUSTRATED AND ILLUMINATED."**

Two very fine specimens of the advertiser's art have come to our desk within a week—both of them from the same city. The one is a letter head, the other a news column advertisement in a Sunday paper. Were it not for the cost of having plates made we would reproduce both these wonderful works of art in the advertising pages of the Journal and offer a prize, not to him who could identify the originals of the pictures on the letter head and in the newspaper, but for him who could give us the best guess as to why the said "originals" had their pictures put on letter head and in newspaper. If the local medical society to which the "originals" belong will have cuts made and pay for an advertising page in the Journal, we will propose to the "originals" that we will run their ads without cost to them.

The letter head is what we call a peach. It has three pictures on it. One portrays the doughty doctor standing over a "patient" prone on an operating table, and under this picture are the words "OPERATING AND SPECTACLE FITTING—GIANT MAGNET IN USE." The only criticism we can find it in our heart to make of this picture is that by virtue of the fact that the photographer who made it did not have in mind the same thing which we fear the doctor himself had in mind, he was guilty of placing his camera at the wrong end of the operating table, thereby making the feet of the "patient" stand out more prominently in the picture than does the doctor himself. We don't believe that was the idea the doctor had in mind, nor do we believe that the "patient" would have had his feet illustrated as of a number fourteen size. A second picture on this same letter head portrays the doctor in the act of doing something

to a "patient," and from the subscription we learn that this picture is intended to show the doctor's method of "NOSE AND THROAT TREATMENT." The third picture on the letter head exhibits the doctor in the act of doing something else to a "patient" while some fellow, an assistant we presume, sits quietly by and lets him do it. The label says this picture is intended to illustrate "FRAME FITTING." We are surprised that a patient would let his doctor use him for advertising purposes—we cannot conceive of any other purpose in such a letter head—and we are so much surprised that we really do not believe the party posing as a patient was a bona fide article.

But the letter head, while it does stand out as a glorious example of impressive advertising art, is absolutely inexpressive and insignificant when compared with the production in the Sunday paper. There's only one picture in the paper, but it's bigger than all three of those on the letter head and it has a label under it and a whole newspaper article beside. The article is about "Little Jimmie," with occasional reference to Dr. ————— and Dr. —————, but in that picture "Little Jimmie" is an inconsequential part of the whole. "Little Jimmie," according to one of the doctors, "has all the marks of gentility." Well, after looking over the picture carefully and observing the expression on wee Jimmie's countenance and noting just how little space he takes up in the picture, and then surveying further and observing the expanse of the back of the nurse in the picture and noting how much of the rest of the room is taken up by the two doctors, we must agree that Jimmie has *all* the marks, though we cannot believe that his estimate of the commercial value of newspaper advertising at all measures up to that which others in the picture place upon this means of securing public notice.

How long, O Lord, how long are medical societies going to countenance such practice by men within their ranks? Why should we condemn the Hartmans and Reynolds and Knoxes and calmly ignore such disgusting methods practiced by our own members? Echo answers—"WHY?"

P. S.—We here acknowledge our thanks to the fourteen gentlemen who sent us copies of

the Sunday paper containing the picture above referred to, and, at the same time, beg to propound to them this question—What are you going to do about it? We also desire to assure them that we will comply with their urgent requests that we do not tell that they sent us the papers. Oh me!

THE NEW SECTION.

For a long time the need for an eye, ear, nose and throat section of the Tennessee State Medical Association has been apparent. It was not, however, until last year that the members who will compose this body felt that the time was ripe for its creation. The section was organized one year ago, after action by the House of Delegates, and will have its first scientific program presented at Knoxville on April 3rd, one day before the meeting of the general session of the Association. The indications are that this program will be one which will far exceed the anticipations of the officers of the section and that the attendance will be greatly in excess of the number expected. Dr. F. P. Calhoun, of Atlanta, and Dr. Emmett Jones, the latter widely known because of his work on sub-conjunctival injections, will appear on the program.

There have never been any members of our state organization who have thrown themselves more earnestly and unselfishly into its work. The Journal is sure that their zeal and their unflagging interest in scientific work will insure the unqualified success of the section in which they can have full opportunity for consideration of those subjects most interesting to them. Every man who is concerned with the problems of practice in this especial field should be on hand at Knoxville Monday morning, April 3rd; when the Section on Eye, Ear, Nose, and Throat will begin its work.

DR. S. M. MILLER.

After a protracted illness, borne in a manner characteristic of the man, Dr. S. M. Miller died at his home in Knoxville on Friday, January 28, 1916.

Complying with his expressed wish, the Journal makes simple record of the passing of this man whose long and useful life was

spent in quiet but earnest and active effort for the benefit of humanity.

For forty years S. M. Miller was a practicing physician. There were no stains on his record. It speaks for him. No words of praise can add a spark of brightness to it, for it glows with the light of honorable deeds performed, professional achievement attained, unselfish effort exerted, manly courage exhibited, and numerous expressions of love for fellowman.

IS MORPHIN-HYOSCEIN ANALGESIA USED IN TENNESSEE?

The Journal has received a letter from a very intelligent lady who read an article recently published in our columns on the subject of "Morphin-Hyoscein Analgesia in Obstetrics." The good woman wants her letter to appear in the Journal and we want to publish it, but before doing so we want to get some definite first-hand information from those of our professional readers who have used or who are using morphin-hyoscein in their obstetrical work. We sincerely hope that a considerable number of the members of the State Association will favor us with replies to the questions submitted below and will be grateful to all who will comply with our request.

1. Do you use morphin-hyoscein in your obstetrical work?
2. Have you ever used morphin-hyoscein in your obstetrical work?
3. Why did you quit using it?
4. In how many cases have you used it?
5. Do you use it in every case?
7. At what stage of labor do you give the initial dose?
8. How often do you repeat it?
9. What determines the time of administration of each dose?
10. Do you find it necessary to use chloroform in cases in which morphin-hyoscein has been given?
11. Do you use morphin-hyoscein in labor cases in private homes or only in hospital cases?
12. Have you noted any marked nervous manifestations after its administration?
13. Have you noted any ill effects pro-

duced on the child from morphin-hyoscin?

14. On the mother?

15. Have you had an increased or a decreased infant mortality since you began the use of morphin-hyoscin?

16. Have you had post-partum hemorrhage or other complications more often where morphin-hyoscin was used than in cases where not used?

17. Do you find it necessary to use forceps as often when morphin-hyoscin has been given as when not?

18. Why do you use morphin-hyoscin in obstetrics?

19. Why do you not use morphin-hyoscin in obstetrics?

TENNESSEE RECIPROCITY.

For the benefits of an increasing number of inquirers we publish again the states which maintain reciprocity relations with Tennessee. Texas has been recently added to the list, and New Jersey and New Hampshire require compliance with certain conditions not stipulated by other states.

Arkansas, Georgia, North Carolina, Virginia, West Virginia, Missouri, Oklahoma, Indiana, New Mexico, Colorado, Nebraska, Utah, Michigan, Minnesota, Wisconsin, Pennsylvania, Texas, and, conditionally, New Jersey and New Hampshire.

Dr. A. B. DeLoach, Secretary of the State Board of Medical Examiners, Memphis, is the one to whom inquiries should be addressed for information as to what is necessary to be done by physicians contemplating removal from Tennessee to some other state.

1916 REPORTS.

Below is presented a list of counties from which 1916 membership reports were received at the office of the Secretary of the State Association up to February 10. The number of members reported is shown by figures following the name of each county.

Some of the county secretaries have failed to send in the names of the officers of their respective societies. These should be given in the annual reports. Some of the county secretaries have collected dues from a part of their members and are holding out reports

for the purpose of collecting dues from all who have not paid. The state secretary will be very grateful to all county secretaries if they will report the names of those who have paid 1916 dues and remit the amount payable for state dues. This is important for several reasons—it will enable the state secretary to report these names to the A. M. A., will help to keep books and records correct, and will make it possible for the Committee on Medical Defense to know who is entitled to defense and for what period.

Reports so far received are as follows: Anderson, 6; Campbell, 13; Davidson, 100; Gibson, 2; Giles, 14; Grundy, 9; Hamblen, 14; Hamilton, 34; Haywood, 5; Jackson, 5; Jefferson, 14; Knox, 47; Lake, 8; Loudon, 4; Macon, 7; Madison, 11; Maury, 15; Monroe, 10; Montgomery, 10; McNairy, 5; Overton, 8; Polk, 10; Rhea, 1; Robertson, 16; Scott, 8; Shelby, 99; Smith, 14; Sullivan, 20; White, 14. Total for 1916 to February 10, 523.

HOW A JUDGE LOOKS AT IT.

That medicine is not an exact science is a fact well understood, but it is remarkable how inexact it can be shown to be when applied by different doctors to bootleggers, perjurers, kings of frenzied finance, murderers, and manufacturers of various beverages and fake medicines.

Let some manipulator of stocks and bonds gut a corporation and appropriate to his own use a few millions which do not belong to him run foul of a court and be sentenced to a government prison. Does he worry? Why should he? He has his millions—or rather the millions not his—and he can and will get a "certificate" from one or a bunch of doctors which bears testimony that he has a nephritis that will bring about his death in a month if he is kept in confinement. This "certificate" is the magic key that at once opens to him the gates of prison and the gates to the garden of health. In less than the month which would have seen his death in jail he is well enough to be engineering new deals in the day and to enjoy huge and soul-satisfying chuckles when, in the ease of his palatial home, at night he happens to think about that "certificate."

Let a "prominent" bootlegger or loan shark

get tangled up with a court and sentenced to imprisonment. Does he worry? Not much. He generally knows where he can get a "certificate," and even should the regular source of supply fail, it is highly probable that a few really high-class physicians may be able to discover a very slight but very dangerous irregularity in his heart action—say a slowing of the beat on deep inspiration, or some other startling thing like that. And if his heart is all right, why anybody could tell he had rheumatism that would ankylose every joint and even his eyelids if he were forced to stay in jail a month! And if he were made to work on the rock pile one whole day his whole family connection would become stiff in the joints and he himself would just simply come to pieces! So he gets his "certificate" and goes back to selling the kind of booze that would make a rabbit spit in a bulldog's eye, or, if he's a loan shark, back to the pleasant pastime of collecting anywhere from one hundred to one thousand per cent on loans he has made to ignorant and unfortunate wage earners.

But, believe it or not, we have heard that there's a judge in Tennessee who is so ignorant of the limitations of medical diagnosis that he really believes a doctor can tell that there's nothing the matter with a convicted person who is perfectly well. This judge knows from observations he has made in his long experience on the bench that there are always to be found doctors who can find something horribly wrong with any convicted "prominent" perjurer. So what do you think he said when a batch of "certificates" was presented to him which were signed by good doctors and which bore witness to the state of ill health of the convicted? Here's what he said: "I have long since learned that in cases of this kind doctors' 'certificates' are easy to get. Have this man examined by the Government physician and report to me." Why, Judge!

And he—the convicted—went to jail. Too bad!

It's about time for us to wake up. The decent public is fast getting on to the fact which has been long known to the "prominent" bootlegger, "influential" loan shark, the bank wrecker, and the honorable judge, namely, *that doctors' "certificates" are easy to get.*

WHO DOES YOUR "WASHING?"

One who is old enough to vote and whose home has been in the country or in a small town can easily call up the picture of the "wash kettle" and the "clothes paddle" in the back yard near the well or down near the "spring branch." Some of us can remember the old ash hopper in which was treasured the selected ashes to be used in making certain needed materials for cleansing purposes.

In these days, in the larger towns and cities, a familiar sight on the streets on Monday mornings is the negro "washwoman" with a big bundle of soiled clothes which she is taking home with her for the purpose of separating them from more or less of the dirt they hold as the result of having been worn during the previous week. Did ever you go to the place of abode of the sable hued artist who "washes" the garments worn by your family and you? Have you ever taken the trouble to see whether smallpox or consumption is the malady in present ascendency in the aforesaid abode? Have you had discovered to you the source of supply of the supposedly cleansing fluid in which your clothes are "washed?" Have you ever peered into the inhabited interstices of the bed on which your "washed" clothes are allowed to repose—with the cat, perhaps—until ready to be put into the basket for delivery at your home? If you have not looked into these matters, we advise you—*don't*. It'll make you sorry you have been wearing clothes if you see for yourself just what happens to them when entrusted to the average "washwoman."

All of which is merely by way of preface to what is here to follow.

Some years ago the writer was busily engaged in an effort to put a stop to the spread of smallpox. When we found a white family attacked with smallpox it was frequently the case that we were informed that the unwelcome disease had been contracted as the sole and direct result of wearing clothes that had been washed at the home of a "washwoman." Invariably the female head of the house in the colored family where smallpox was present informed us in no uncertain manner, "We got it from the white folks clo'se." After oft-repeated communications of the nature indicated we were forced to decide that this matter of having clothes washed by "washwomen" was one of grave import from the standpoint of the public health. When to the above observations we added one to the effect that we had never heard of a bedbug in a white folks' house whose progenitors had not been imported "in the wash," and that we had heard the presence of these pesky animals having residence in black folks' houses invariably accounted for as due to the fact that "washing" had been taken in, then we were positively and everlastingly convinced that our Southern system of "washing" is one deserving condemnation of severe degree, which brings us to what we were going to say.

There are laundries and there are laundries.

Some of them are old and some of them are older. Some of them are careful and some of them are careless of the health of their employes. All of them, save one which we have recently visited, and from which we solicited the laundry advertisement appearing in this Journal, boil and boil, and churn and churn, and dose and dose with fibre-destroying and color-obliterating chemicals the clothes which they launder. It is probably true that most laundry processes kill most of the pathogenic organisms in clothes, but it is also true that most of them murder the clothes at the same time with the chemicals used to produce bleaching effect. This one laundry above referred to uses a new process which appeals to us as the most effective yet devised, from the standpoints of germ destruction, of bleaching effects, and of clothes conservation. This is known as the "electric process" and is so called because an electric current and a mild solution of sodium chlorid are depended on to whiten the clothes and finish any undesirable germ which may have persisted after two or three thorough washings, with the purest soap and soda obtainable, in city water at temperatures of from 120 degrees to 170 degrees F. It is really remarkable how this process removes stains and dirt, without injury to fabric or color and how practically all bacteria are destroyed as shown by repeated bacteriologic tests.

After a careful inspection of the plant in operation and after having patronized the establishment ourselves, we commend the laundry whose advertisement you will find in this Journal—and we do so in the interest of health and not for the purpose of "boosting" this particular laundry.

News Notes and Comment

Dr. J. W. McClaran, Jackson, is serving in a war hospital at Veron, France.

Dr. D. L. Flanary, Dyersburg, spent some time at the Mayo Clinic in January.

Dr. R. A. Harrington, Nashville, can be found in new offices at 410-411 Jackson Bldg.

Dr. E. W. Patton, Shelbyville, is in Chicago for two months' work in the clinics.

Dr. J. L. Andrews has been reappointed Superintendent of Health for the City of Memphis.

Dr. Percy W. Toombs, Memphis, has resigned from the surgical staff of the Illinois Central Railroad.

Dr. D. E. Shields, Morristown, after an illness of four months' duration, is able to be at his office.

Dr. B. A. Deakins, East Chattanooga, was elected County Physician of Hamilton County on January 3, 1916.

Dr. J. C. Cunningham, Hixon, is recovering from the effects of a serious operation which he underwent in January.

Dr. W. D. Haggard, Nashville, attended the Conference on Health and Education of the A. M. A. in Chicago, February 7, 8, 9.

Dr. Leopold Shumacker has succeeded Dr. J. Webster Horton as Physician in Charge of Pine Breeze Tuberculosis Hospital, Chattanooga.

We desire to call the attention of our readers to the advertisement in this issue of the City View Sanitarium calling for nurses to enter training.

Dr. Jere L. Crook, Jackson, was in Nashville on February 1, attending a meeting of the State Tuberculosis Commission, of which he is a member.

The Knoxville doctors are getting things ready for you. Don't fail to arrange your affairs so that you can be at the annual meeting—April 4, 5, 6.

Have you made arrangements for leaving home on April 3, so that you can be present on the morning of the 4th, when the Knoxville meeting is called to order?

Dr. W. P. Robinson, Nashville, has resigned the position of Field Director of Rural Sanitation with the State Board of Health, after four years of splendid service.

The State Tuberculosis Commission met in Nashville on February 1 and perfected permanent organization. Mr. James D. Richardson, Murfreesboro, was made Chairman of the Commission and Dr. Olin West, Nashville, Secretary. This Commission was

created for the purpose of building a state hospital for the treatment of pulmonary tuberculosis.

The Journal was honored with a call on February 1 from Dr. Frederick R. Green, Secretary of Council on Health and Public Instruction of the American Medical Association.

The new hospital at Morristown was opened about the first of February and Hamblen County doctors are glad. The hospital has a thirty-five bed capacity, which can be easily increased to fifty.

The American Journal of Orthopedic Surgery has a new editor in the person of Dr. Mark H. Rogers, Boston. For thirteen years a quarterly publication, this journal will hereafter be issued monthly.

The Journal acknowledges the receipt of a very dainty card from Joseph Alexander Crook, Jr., a very handsome young man who has come to reside with his parents, Dr. and Mrs. Jere L. Crook, Jackson.

The annual banquet of the Chattanooga Academy of Medicine and Hamilton County Medical Society was held on January 7th and was enjoyed by nearly one hundred physicians. Dr. Y. L. Abernathy directed and controlled the festivities.

The new wing of the Davidson County Tuberculosis Hospital has been completed and put in use. This much-needed addition will greatly increase the usefulness of this institution, which has done splendid work under the direction of Dr. J. M. Oliver.

Dr. H. T. Brooks, Memphis, attended the Conference on Health and Education of the A. M. A. in Chicago, February 7, 8, 9, and was the official representative of the Tennessee State Medical Association at this Conference.

Dr. Wm. Krauss, Memphis, was a visitor at the Journal office while attending the conference of prominent Tennesseans who are

determined to have a new constitution for Tennessee. If men like Krauss are called upon to frame a new constitution, there need be no fear of the change.

Dr. Jos. H. White, Senior Surgeon U. S. P. H. Service, is delivering a course of lectures on Sanitation to the students of the Peabody College for Teachers. The Journal feels that Peabody is to be congratulated on having the services of this distinguished sanitarian who has done so much for the public health interests of the South and who has reflected great honor and credit upon the U. S. P. H. Service.

The Department of Health of the City of Chattanooga will open a Free Clinic on March 1, 1916. Quarters have been provided in the City Hall and some of the most prominent physicians and dentists of Chattanooga will serve in this clinic. Dr. E. B. Wise, city physician, will be in charge and will have associated with him twenty-four physicians and four dentists, each of whom will act at stated times on such service as may be most agreeable to them.

Society Proceedings

FROM THE SECRETARY OF THE SECTION ON EYE, EAR, NOSE AND THROAT.

The first meeting of the Eye, Ear, Nose and Throat Section of the Tennessee State Medical Association will be held at Knoxville on April 3. There will be a morning, afternoon and evening session. Every physician in the state who is especially interested in this line of work should avail himself of the opportunity of attending this meeting. Invitations have been sent out to all that the Secretary of the Section could locate. Of course, it has been a hard matter to find out exactly, as we have had to depend on the directory for the information, but those who have failed to receive a letter from me can be assured that it was not intended to ignore them in any way and will take this as an expression of a desire to hear from you and also as extending to

you an invitation to read a paper or be present and take part in the discussion. We hope to have a full and complete list of all the physicians of this state by the time of the meeting, that is, those who are especially interested in this section.

Yours fraternally,

O. DULANEY, Secretary.

Dyersburg, Tenn.

KNOX COUNTY.

The Journal has received, through the kindness of Dr. H. H. McCampbell, Secretary, a copy of the 1916 program of the Knox County Society, of which Dr. Oliver W. Hill is President, and Dr. Edgar McNabb, Vice-President. This printed program is complete and indicates that the Knox County profession is alive and moving forward. A list of members is appended to the program and this significant and commendable invitation appears on the front page: "All physicians are welcome to our meetings whether they are members or not."

McNAIRY COUNTY.

The McNairy County Medical Society met at the office of Dr. W. T. Bell on the 23rd day of December, 1915, and elected officers for the year 1916 as follows: Dr. H. C. Sanders, Livingston, President; Dr. J. R. Smith, Selmer, Vice-President; Dr. W. T. Bell, Selmer, Secretary and Treasurer.

W. T. BELL, Secretary.

Selmer, Tenn., Jan. 29, 1916.

MAURY COUNTY.

The Maury County Medical Society met in regular session January 3, in the lodge room of the Elk's Club. President H. A. Gant presided, with fifteen members present. Dr. P. H. Faucett reported a most interesting case, both regarding diagnosis and pathological findings; being a very large pus tube situated on top of and closely adherent to the rectum, and which might easily have been mistaken for pregnancy. Dr. Herman Spitz, Nashville, then read a very interesting paper; subject, "Report of Results of the Use of Antogenous Vaccines for Infectious Troubles of the Upper Respiratory Tract."

After a somewhat limited but interesting discussion, opened by Dr. W. K. Sheddan, Dr. Spitz, in closing, answered many questions, explaining many of the points in the production of autogenous vaccines and why results as a usual thing are not obtained from stock vaccines.

This was decidedly the most interesting meeting the Society has had for several months. When the program was finished the President and Secretary were appointed a committee to entertain Dr. Spitz at lunch at the Guest House.

M. A. BEASLEY, Sec'y.

OVERTON COUNTY.

The Overton County Medical Society met December 10, 1915, and elected the following officers for 1916: President, W. M. Brown, Hilham; Secretary, A. B. Qualls, Livingston.

Plans were discussed for the coming year and all present paid yearly dues to state and county societies. Adjourned, to meet on second Friday of each month during the year.

A. B. QUALLS, Secretary.

GREENE COUNTY.

The Greene County Medical Society, Dr. E. M. Bell, President; Dr. M. A. Blanton, Secretary, has adopted the "Post Graduate Course of Study" suggested by the American Medical Association. A printed program for 1916 has been sent to the members and the Journal has received a copy. There is no doubt about it—society meetings and discussions will be made more interesting and profitable by having a well ordered program with correlated subjects for each meeting. The old hit and miss way won't get anywhere. How much better it is, for instance, to have "Uremia" and "Necessity of Routine Examination of the Urine and the Differential Diagnosis of Coma" by men to whom these subjects are assigned months ahead, than to have the same old "Typhoid Fever," "Pneumonia" and "Management of Labor" by men that just write because—well, just because. The Greene County Society is right—have a program and have a worth-while program.

DAVIDSON COUNTY.

The annual meeting of the Nashville Academy of Medicine and Davidson County Medical Society was held January 4, 1916. The annual report of the Secretary-Treasurer was read and accepted. The report shows the Academy to be in good financial condition. It was referred to an Auditing Committee, composed of the following members: Dr. A. G. Nichol, Chairman; Drs. S. M. Bloomstein and E. M. Fuqua.

Election of officers for the ensuing year resulted as follows: President, Dr. H. M. Tigert; Vice-President, Dr. R. L. Jones; Secretary-Treasurer, Dr. G. F. Aycock.

The Academy then adjourned in favor of the social features of the evening, which consisted in a banquet, for which 150 plates were set. Toasts were responded to by Drs. Bromberg, Cowden, Price, Witt, Sumpter and Savage, Dr. Tigert acting as toastmaster.

January 11, 1916. The meeting was called to order at 8 p. m. by the President, Dr. Tigert, with the following members present: Drs. West, McCabe, Keller, Shoulders, Jones, Howard King, Schell, Etter, Tharp, Denham, Ward, McKinney, Maxwell, Haley, Robert Sullivan, Bloomstein, Morrissey, C. C. Sullivan, T. A. Leonard, DeWitt, E. L. Roberts, Savage, S. S. Briggs, Pickens, Witt, Handley, Crawford, Hugh Barr, Lucian Caldwell, Duncan Eve, Jr., Manier, C. F. Anderson, Cowden, Toy, Orr, Kennon, Sumpter, H. G. Tucker, Givan, W. A. Bryan, Dunklin, Gallagher, O. N. Bryan, N. C. Leonard, Jack Witherspoon, Hibbett, Dixon, Friedman, Haiman, Oughterson, Bromberg, R. R. Brown, Larkin Smith, Sharp, Pollard, Jno. W. Moore, Fuqua, Dabney, Teachout, B. G. Tucker, Tigert and Aycock. Total, 65.

Minutes of the previous meeting were read and approved. The chair appointed the following as Legislative Committee: Dr. W. E. Hibbett, Chairman; Drs. Olin West and H. H. Shoulders.

The essayist being detained for a few moments, Dr. E. L. Roberts demonstrated a new mouth gag and tongue depressor of his own device.

The essay of the evening was read by Dr. O. N. Bryan, his subject being "Functional

Disturbances of the Stomach." The discussion was opened by Dr. W. H. Witt. The speaker stated that dyspepsia as a symptom is one of the most difficult problems we encounter; that we must regard stomach disturbances first as a symptom, which should have as much importance attached to it as any other symptom or group of symptoms. Emphasis was laid on a thorough analysis of symptoms, and reference was made to great difficulty experienced in getting patients to definitely describe their symptoms; relation to eating usually escapes their notice, though if patient gets relief from eating, he is usually prompt to acknowledge it. Dr. Witt thinks the majority of patients in private practice, complaining of dyspeptic symptoms, are functional. He thinks prolapse of the stomach should not be basis for too rapid conclusions.

At this point the chair extended to Dr. A. F. Richards, of Sparta, Tenn., the privileges of the floor. Replying, Dr. Richards referred to a case in his practice which was thought to be vomiting of pregnancy, but which gave a history of colic, jaundice, etc.

Dr. Oughterson: Thinks stomach trouble without pathology is rare, although we are frequently unable to detect the exact lesion. Referring to atonic stomach he stated that many of these cases show no symptoms, while in many cases of gastric disturbance, this is our only finding. He referred to a case which on physical examination showed a low stomach, but later on X-ray examination, the stomach was in its normal position. At a subsequent physical examination, the stomach was again low down in the abdomen. The speaker thinks X-ray of the stomach as to size and position is often misleading. In his experience the most striking so-called "functional" cases are in people who are overworked and live improperly.

Dr. Fuqua: Says the X-ray bismuth meal is the very factor that has proved there is no definite position of the stomach. He thinks the majority of patients in the erect posture will show the greater curvature below the umbilicus.

Dr. Witt: Combatting the statement that a large per cent of tubercular patients come complaining of stomach symptoms, does not

believe that more than 10 per cent of cases show this as a leading symptom.

Dr. Cowden: Hyperchlorhydria is a condition which simulates almost everything. He thinks ulcers are very few, and that chronic appendicitis is a cause of many cases of stomach disturbance. Considers X-ray findings often misleading; that the position of the stomach is not so important, but its ability to empty itself. Functional disturbances can be regulated with diet alone. Frequently hydrochloric acid given before a meal gives relief.

Dr. Howard King: Thinks X-ray findings as symptom should be given as much weight as any other symptom; the last two years have constituted the era of fluoroscopy. He thinks the outline, movements, etc., of the stomach should be sought, and that too much emphasis should not be laid on the position. Time of emptying is not always indicative, as the stomach of carcinoma frequently empties itself rapidly.

Dr. Billington: Abdominal supporter may give relief in cases where the stomach and colon are prolapsed. A proper fitting corset is necessary.

Dr. Sumpter: Thinks the stomach the most abused organ in the body; that it plays an important part in longevity. He thinks the diet should consist of anything that agrees with the patient. The appendix, floating kidney and gall bladder are frequently the offenders in gastric disturbance.

Dr. R. L. Jones: Emphasizes the value of water with meals as a stimulant to gastric secretion.

Dr. W. A. Bryan: Does not think we should promise much for surgery, unless we can trace some definite connection between the gastric disturbance and the part on which surgery is to be done.

Dr. O. N. Bryan (closing): The closer we watch hyperacidity, the less we will find ulcer, on the proper analysis. Diet correction will relieve those cases due to error in diet. He believes pathology is back of most cases. A very large percentage of tubercular patients complain of some form of gastric distress.

On motion the meeting was adjourned.

January 18, 1916. The meeting was called to order at 8 p. m., with the president, Dr. Tigert, in the chair. The minutes of the previous meeting were read and approved. The Secretary read a communication from Dr. E. C. Ray, Chairman of a Committee of Osteopaths, who are prosecuting one William P. Wood for practicing medicine and osteopathy without a license. In this communication, the co-operation of the Academy was asked. After considerable discussion, it was moved by Dr. Witt and seconded by Dr. Savage that the matter be referred to the Committee on Public Health and Legislation; carried. Moved by Dr. Witherspoon and seconded by Dr. Hibbett that the committee be instructed to act independently, and that the Secretary acknowledge receipt of Dr. Ray's letter, informing him that the Academy would take independent action through its Public Health and Legislative Committee. Carried.

The essay of the evening was read by Dr. W. G. Kennon, his subject being "Ocular Findings in Tabes." The discussion was lead by Drs. Hilliard Wood and Herschel Ezell.

Dr. Wood: Descending atrophy in tabes is to be distinguished from optic neuritis in that no enlargement of the nerve head precedes in atrophy and contraction does not follow as in neuritis. The blood vessels are almost normal till in the late stages, when they are contracted. The amount of vision is not always in proportion to the visible changes in the nerve head. The ocular manifestations involve the question of innervation—either reduced or perverted—mostly reduced. The Argyll-Robertson pupil is a sign that presents many variations.

Dr. Ezell: Thinks that, as a rule, more than one ocular muscle is involved at a time. Early in tabes are found transitory pupil reactions, depending on third nerve and sympathetic involvement.

Dr. Savage: The apparent improvement in the atxia when the patient goes blind is really not an improvement in the actual condition, but more than likely due to the fact that the patient has been guiding himself largely with his vision, and when he loses this he depends on his powers of feeling altogether.

G. F. AYCOCK, Secretary.

Book Reviews

"THE ETERNAL MAGDALENE." By Robert H. McLaughlin. George H. Doran Co., New York, 1915. \$1.25.

What a wonderful experience it must be for an author to realize that he has conceived a living plot, but more wonderful still, is to possess an ability to put into words and action that plot.

Robert H. McLaughlin, whose book, "The Eternal Magdalene," which is a novelization of the play of the same name that Julia Arthur is starring in in New York, is the most vital propaganda novel of a decade. It is vital because it deals with the problem of the tenderloin that is being discussed and agitated everywhere in America at this time. It is a human document so filled with evidence of a sympathy for the woman who has erred, as to cause many a pull at heart strings, that have grown hard because of lack of sympathy.

"The Eternal Magdalene" grips you, it holds your interest, and you are impressed with the fact that the author is in dead earnest—that he is telling the truth.

Society has been controlled for twenty centuries by moral cowards who have feared to express themselves, and for this reason the majority of its members are hypocrites, leading in many instances, double lives. Hypocrisy and its evil brood have blindfolded justice and kept her from doing merciful deeds among poor female creatures, who have violated the moral code, and because of this violation, driven from precincts inhabited by men and women of respectability.

The Madgalene is the most abused creature in all the world. There are thousands of them who have tried to escape a life of shame, but, because of an unfeeling social custom that damns those females who err, they sink to depths unfathomable. Many imagine that demimondaines live lives of ease. They do, if life in a prison cell constitutes ease. The prostitute is truly in prison, there are no bondsmen to bail her out. She is in for life. No pardon is ever granted her. She is regarded as being below the hardest criminal in the social scale and constantly lives in the presence of diseases which sooner or later attack her, and make her a worse outcast than she already is.

The book deals with a vice campaign organized to drive the segregated district out of existence. Arnold Macy, a man of the world, is one of a party of raiders one evening, and his comment to Bellamy, the young newspaper man who has invited him to ride with the chief of police in apropos of the roue, "Sounds like great sport." Bellamy very quickly rebukes him by saying, "Yes it will be sport, but it will be the saddest, cruelest sport you have ever looked at. Here are these girls, without money, thrown out into the street, and hounded out of town. They have not a friend in the world; everybody is their enemy. Even the men and sa-

loon keepers who make a living off of them use every trick they know to swindle them. Talk about your Roman circuses, and your Neronian Orgies! Believe me, Arnold, this new form of sport is not lacking in racy cruelty. I'll grant we would be better off without these girls, but it seems to me, there ought to be a less heartless way out of it. Somehow I can't get my mind in the attitude to see the justice of it all."

In speaking of Gleason, the revivalist and reformer, who incidentally is a low, ignorant money grabber, the chief of police says about the notoriety he is seeking, "If he doesn't get all the credit for this tonight he will raise the devil with the police, and we will have more trouble than we've got now." Unfortunately many reformers are publicity seekes, and unless they get the publicity they are looking for they make trouble. Their motives are entirely selfish. They are trouble makers, pure and simple.

Elijah Bradshaw, a millionaire of Edenburg, finances the vice campaign. He is a cold, self-made business man, with religious scruples that make him very narrow. He has a wife, a daughter and one son. He keeps them under restriction, with the usual result. Their innocence, rightly interpreted, meaning ignorance, eventually leads them into doing certain things that society condemns.

The main character in the book, The Woman, is a former resident of the tenderloin; she obtains employment in Bradshaw's, and it is in that home that she works marvels, for, like "The Servant in the House," she only does good. She develops the character of Bradshaw, and makes a new man of him. One night she announces that her work has been completed and that she is leaving; Bradshaw tries to persuade her to stay, but to no avail. He insists on her telling him who she is and about her mission. Her reply is filled with the tears of Magdalenes' for twenty centuries as she says:

"I am The Eternal Magdalene, made immortal by the touch of His hand, two thousand years ago. When they that would have stoned me turned sullenly away, He raised me up, saying: 'Woman, I appoint you My messenger. Go thou down the centuries and bear witness to this that thou hast seen. In every clime and in every season thou wilt find those who have sinned as thou hast sinned. Stand between them and their persecutors as I have stood between thee and thine. And upraid them not, for are they not all children of the same Father There are among my disciples those who will preach of many things, but to you I entrust this text, 'He that is without sin among you, let him first cast a stone at her.' And He departed and I stood as one transfixed, gazing after him. And my brow burned from His touch, and through my veins flowed blood that had been cleansed as by fire."

"The Eternal Magdalene" deserves careful and prayerful reading by all of mature minds. Especially should it be read by clergymen and social work-

ers. If they are not altogether consumed by their ego, their eyes will be opened, and a "mild and healing sympathy will steal over them before they are aware" and in the distance they will hear a still small voice crying out of the wilderness saying "He that is without sin among you, let him cast the first stone at her," and if they will but listen carefully, they will again hear that same voice saying, "Go and sin no more;" "Judge not, that ye be not judged;" "Love thy neighbor as thyself."

LEE ALEXANDER STONE.

LABORATORY METHODS, WITH SPECIAL REFERENCE TO THE NEEDS OF THE GENERAL PRACTITIONER. By B. G. R. Williams, M.D., and E. G. C. Williams, M.D., formerly Pathologist of Northern Michigan Hospital for the Insane, Traverse City, Michigan. With an introduction by Victor C. Vaughan, M.D., LL.D., Professor of Hygiene and Physiological Chemistry and Dean of the Department of Medicine and Surgery, University of Michigan, Ann Arbor, Michigan. Third Edition, illustrated with forty-three engravings. St. Louis, C. V. Mosby Company, 1915.

The general practitioner is a much abused individual. He is the object of attack by a large proportion of commercial agencies who have first one thing and then another, for the special benefit of the general practitioner. Drugs, instruments, furniture, automobiles, etc., ad nauseam, are being offered daily for the use of the general practitioner. Some of the medical publishing houses have entered the lists of those far-sighted firms and corporations who are in business for the sole purpose of supplying the urgent needs of the ubiquitous general practitioner.

That the market is flooded with handbooks and compends on all subjects in which the general practitioner may have some slight interest is an established fact. Unfortunately many of these books are not desirable. They attempt to teach a subject in a limited space, many essentials are of necessity eliminated, and no one can get the proper conception of a subject if it is condensed and many necessary details omitted.

The authors of the above compend of Laboratory Methods state in their preface to the first edition: "It has been the aim of the authors to simplify methods both as to apparatus and technic." This is a commendable object, but it is one that is liable to do much harm. The many difficulties encountered in laboratory work are not to be overcome by "simplifying methods and technic." The use of a piece of window glass for a slide, a hat pin for a platinum loop, a pair of tissue forceps, rubber band and a razor instead of a microtome, a thermos bottle instead of an incubator, etc., are examples of the extent of some men's ingenuity when working under difficulties; but certainly these makeshifts are not to be encouraged in the manner recommended by the authors.

Because Jenner, Pasteur, Koch, Sims, Long Polender and others mentioned by Dr. Vaughan in his introduction, were country physicians or village practitioners, is no proof that every general practitioner should undertake the performance of tests that require, for their accurate performance, careful training and complete knowledge of the subject. "But," say the authors, "ample directions are given for the performance of the tests, and also we call attention to the sources of error, pseudoreactions, etc., that may be encountered." And then they frequently refer the general practitioner to *larger texts* for further light on the subject. Why not go to the more complete book to start on? Why waste time on a compend that recommends the English system of weights and measures as against the Metric? The use of tissue forceps, rubber band and razor as against a microtome? That dismisses, malaria with one short paragraph and devotes three pages to Ehrlich's diazo reaction?

Nine full page engravings of test tubes, racks, microscopes, whiskey glasses, staining bottles and other apparatus help to illustrate the book. A complete chapter of thirteen pages is devoted to a discussion of "Milk and Its Home Modification." The last place in the world where a general practitioner would look for instruction on this subject. "Searching for Germs—All One Need Know About It," in sixteen pages! Space does not permit further discussion. The reviewer must differ with Dr. Victor C. Vaughan. He cannot recommend this book.

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HOW AND WHEN TO USE DIGITALIS.*

By E. R. Zemp, M.D.
Knoxville, Tenn.

Medicine today is being studied more as a science than as an art, yet he who seeks success in the field of active work will find that it comes more readily from being artful than from being scientific. Knowledge is power only when used with judgment and care, and the art of medicine consists in applying our knowledge to the individual in such a way that it produces a maximal amount of good with a minimal amount of harm. This demands a knowledge of patient, remedy and disease. Too often failure to attain success in a given case comes from carelessness and ignorance. The first is inexcusable, the second not always avoidable.

Perhaps nowhere in the practice of medicine is carelessness and lack of knowledge better demonstrated than in the use of digitalis. The word is so closely associated with heart trouble, whatever that may mean, that whenever we say the one we see the other. To a large number of physicians affectations of the heart call for digitalis, without proper regard as to what the lesion or condition may be. No attempt is made to diagnose the condition, or to find out its cause. The patient has heart trouble, and digitalis is good for it. If that were so, the application would be easy, but logic is a poor substitute for facts, and even art cannot stand on false premises. It must be backed up by truth.

The truth is, digitalis may be beneficial, useless, or harmful, depending upon the condition of the heart being treated. There are many things which influence its action, and we are often disappointed in its effect because we are expecting the impossible. There is a way and a time to use this valuable drug, and when no mistake is made in these, good results are not infrequent. Its action is variable, but so are patients, and a study of both will generally explain why we fail to get desired results on the one hand, and why we get almost marvelous results on the other. The success with any drug, all things being equal, depends upon an active preparation, the proper dose, and the right indication. If these three could always be found in perfect adjustment, failure would never occur—debarring organic influences.

Unfortunately the preparations of digitalis are unstable and easily deteriorate under the influence of time, heat, acids and water, for its active principles are all glucosides. No one of its glucosides entirely represents the drug, but digitoxin more nearly does so. Next in importance is digitalin, both of these glucosides being practically insoluble in water, but soluble in alcohol. The preparations most commonly used are digitalis, in dry powdered form, the tincture and the infusion. Digitoxin is too irritating to be used hypodermically, but digitalin may be used that way in doses from 1-10 to 1-4 gr. Digipuratum may be used intravenously in doses of 15 minims.

All of the preparations of digitalis are very unreliable as regards strength, even when they are physiologically assayed, because they readily and easily undergo deterioration. No two tinctures will show the same strength, ex-

*Read before Knox County Medical Society.

cept by accident. But few of them come up to the 10 per cent requirement. The infusion will rarely be found at a fixed 1.5 per cent, for the drug from which it is made varies. A great cry has been raised about the unreliability and the variability of the preparations of this drug, and yet, what great difference does this make if we are practicing the *art* of medicine? None of the preparations are inert. They all are more or less active, and even if they do vary, they do not vary so markedly as do the patients themselves. Of course, to the man who thinks that ten drops of the tincture is the dose, and who decries its use because results are not forthcoming when he administers it that way, a variable preparation would make a world of difference. But to the man who disregards dosage, and who gives for effect, it makes but little difference that the various preparations do not quite come up to the U. S. P. standard. Too often the blame is put upon the preparation when it should be placed elsewhere. It is said that the infusion is better than the tincture, but here the psychology of error is well illustrated, for we generally give the infusion in doses relatively three times as large as we give the tincture, one-half ounce of the infusion being equal to thirty-six drops of the tincture. Do not understand me to say that standardization is not a very earnestly desired realization. It is, for the more perfected the tools, the more perfect the work. But let us not put the burden of our sins of omission and commission upon a scapegoat of unreliability, when they belong upon our own heads. Almost any preparation, made by a reliable pharmacist, is active enough to give results if we use it properly. Some, perhaps, are less desirable than others on account of local irritating actions. The fat free tincture in an elegant preparation, and may be used hypodermically. It is well to remember that age and other factors may change the glucosides into toxiresins and materially weaken the strength of the preparation; therefore, no preparation should be very old. The gastric juice reduces the potency of digitalis preparations about 25 per cent, hence they should be given between meals and preferably with an alkali.

Digitalis is absorbed from the intestines

slowly, and when the portal circulation is markedly obstructed its absorption may be practically nil. It cannot be given satisfactorily to patients suffering from gastric upset, for while the vomiting that follows large or continuous doses is chiefly of centric origin, there is some local irritation, so that a stomach already disturbed will be made worse by its use. After vomiting has been produced by digitalis, the stomach shows a marked degree of irritability, and the slightest cause is sufficient to excite vomiting. This passes off in a few days after the drug has been discontinued. Because the absorption is slow from the intestines, digitalis cannot be relied upon in emergency cases when administered by the mouth. Intravenously its action is very prompt, much less so when given hypodermically.

The effect of digitalis upon the heart is brought about in a variety of ways, and it is a knowledge of these ways that gives us a rational clue to its use in the various disorders that the heart is heir to. To simply say that digitalis is a heart tonic means absolutely nothing, and he who uses the drug in this manner will very often be disappointed. The heart is a very delicate and complex piece of automatism, so to speak, and is subject not only to its own but extraneous influences. We do not yet understand all of its mysteries, but some of them have been fairly well worked out.

The sinus node is the pacemaker of the heart. Digitalis slows the heart by retarding the projection of impulses from this node, perhaps not directly, but through its action on the vagi centers in the medulla. But this is not a constant effect. In a pulse of normal rate, or slow, in the aged, and in the fast pulse of the infectious fevers, digitalis often fails to slow the rate. High temperatures are said to inhibit its action, but possibly it is the infection that causes the high fever that has this effect. Again, in paroxysmal tachycardia, a not very well understood clinical entity, digitalis is powerless to slow the pulse. Not only does digitalis cause a slowing of rate, but it may change the rhythm, producing arrhythmia of the phasic type. This is always a sign of beginning poisoning.

From its effect upon the tonicity and contractility of the heart muscle, digitalis has

been described as a heart tonic, and in weak, dilated hearts it has well earned its name. It does increase the tone of the heart muscle under these circumstances and causes a more vigorous contraction. By improving tonicity, it takes the slack out of the muscle and makes it more ready to respond to stimulation. It prevents, or overcomes, dilatation. In large doses it increases the excitability of the heart muscle. This may manifest itself in extrasystoles, tachycardia, or fibrillation. These may occur individually, or be mixed together. Increased excitability creates rebellion in the heart so that it no longer runs under the proper and normal control. The extrasystoles may arise in either the auricle or ventricle. So may the impulses that cause tachycardia. In the latter case, there may also arise in the auriculo-ventricular node, producing true nodal rhythm. In auricular fibrillation, the various groups of muscle fibers are in a state of quivering (rebellion), contracting at the rate of several hundred a minute. The effect upon the ventricle is to create disorder, and it contracts in a rapid, disorderly manner, for each contraction of the auricle is transmitted to the ventricle through the bundle of His.

Ordinarily the ventricle contracts 1.5 of a second after the auricle. Digitalis retards, or prevents, the conduction of impulses through the auriculo-ventricular bundle, producing partial or complete heart-block. It is not probable that the coronary arteries are materially contracted from therapeutic doses of digitalis, although they may be from poisonous doses. In hearts that need help, it improves their nutrition by improving the coronary circulation.

It has been taught in the past that digitalis raised arterial pressure, reasoning from laboratory experiments upon animals in poisonous doses. But in man this effect is rarely ever seen, and only in exceptional cases. How often in cases where we wished it would raise the pressure have we been disappointed? High pressure is no contraindication to its use. In fact it is indicated in some cases where the pressure is high and does good service.

Digitalis cannot be classed as a diuretic, although under certain conditions it does produce diuresis. In the normal man it increases the flow of urine but little, if at all. In dis-

eases of the kidney, without failing circulation, it affects the flow of urine slightly. But in those cases with venous engorgement and failing circulation, it wonderfully increases the flow of urine until the excess of fluid accumulated in the body is removed. Then its power as a diuretic ceases. In other words, digitalis acts as a diuretic, not by any direct effect upon the kidney, but by improving the general circulation and overcoming venous congestion.

Weapons of strength may do harm as well as good, so we find in the use of digitalis alarming symptoms or even death may take place. By slowing the heart, increasing its tonicity, contractility, and nutrition; by improving the oxygenation of the blood and removing dropsical effusions, it is often a remedy of great value. But we must not forget that a single dose might cause death, though this is rare unless given intravenously. It is the symptoms of accumulative poisoning that we should be able to recognize, for here, perhaps, lurks the real danger, as they are frequently taken for symptoms of heart disease, and more digitalis given. It is well to note also that the symptoms of accumulative poisoning are found in diseased hearts where no digitalis has been given. That is, the same cardiac picture can be produced by disease that is produced by digitalis. It is very evident that we would not want to use digitalis in these cases, for the theory is borne out by clinical experience. Digitalis makes these cases worse. When giving this drug, it should be stopped if the following symptoms appear: Nausea, vomiting, headache, pulse dropping below sixty, a regular beat becoming irregular, tachycardia, or symptoms of heart-block. It should not be given in cases when the ventricle intermits, or beats prematurely, nor should it be used in cases of bradycardia.

The therapeutic application of digitalis is anything but simple and easy. It requires great judgment and care, and the promiscuous giving of this drug in all heart affections will result in disappointment and grief. It would seem silly to make the statement that patients should be carefully examined and a diagnosis of the heart condition made before giving the drug, but the fact that the drug is

often given in a haphazard way cannot be disputed. There seems to be fixed in the minds of some practitioners that if a patient has a heart lesion he needs digitalis, consequently he gets it.

Let it be borne in mind that this drug can produce an effect that we ought to consider out of regard for the future welfare of our patient. On the part of the patient, it may cause a deep regret—regret that he did not hit Billy Sunday's sawdust trail before taking it.

Excepting emergency cases, digitalis should never be given until rest in bed and proper dieting have been tried. A patient who comes to us with slightly broken compensation should never be given this drug and be permitted to walk around or work. The reason is apparent: a patient with a heart lesion has a well-defined circle within which he can live with comfort and safety. The circle may change from time to time, but as long as he stays within it his heart will do the required amount of work. But if he goes outside of this circle he feels the effect of a crippled heart. Now suppose he applies for treatment at this time, digitalis will make him comfortable, perhaps, but it destroys the lines of his circle of safety. It may be said that digitalis does to decompensated hearts what morphine does to acute pain in the abdomen. It covers up the real seriousness of the case and permits the patient to live in a dangerous zone. Often if the patient is put to bed, no drug will be required, for the heart adjusts itself. If it fails to do this, and no improvement is seen in a week, then digitalis may be given if indicated. We should never accept the patient's statement that he has not time to go to bed, but this point should be insisted upon. Never use digitalis until rest and dieting have been tried.

In regard to the valvular lesion: We do not care so much about that as we do the functional condition of the heart. If decompensation is present, digitalis is indicated, for in a large percentage of these cases auricular fibrillation is present, and it is in this condition that we get almost marvelous results from the use of this drug. Large doses should be given at first until the pulse im-

proves, then smaller doses continued for some time afterward, always watching for the symptoms of accumulative poisoning. Regardless of the mechanics of the valvular lesion, digitalis will do good when compensation is broken. The chief indication for the use of digitalis is **broken compensation**, and this may be present when no actual valvular lesions exist, as in simple dilatation of the heart from muscular weakness. Digitalis, by increasing tonicity and contractility, is of great help in overcoming this condition. Valvular lesions alone do not call for its use. It should never be given until the heart shows signs of distress. Let it be understood that digitalis has no effect, curative or otherwise, upon the lesions themselves. It aids by prolonging diastole, increasing tonicity and contractility, and in improving the nutrition of the heart. When the coronary arteries are contracted, and when there is degeneration of the heart muscle, digitalis should be used with care, for in these cases a slowing of the heart is not always followed by increased force, hence the coronary circulation may be very seriously interfered with. In any case, if the rhythm is normal, the drug has but little power to lower the rate. It is only in auricular fibrillation that the characteristic slowing of the pulse is seen. In many cases, no doubt, toxins cause an increased irritability of the myocardium that counteracts the influence of the drug. Be this as it may, we know that in pneumonia we fail to get a slowing of the heart when we most desire it, and the needed increase in arterial tension is not forthcoming. In valvular lesions of the heart, give digitalis only when compensation is broken or impending. But try rest in bed and dieting first. Where the rhythm is normal, it is of but little service, regardless of how fast the rate.

In the condition of disturbed heart mechanism known as heart-block, digitalis not only fails to do good, but is harmful, especially when the heart-block is partial, for the tendency is to convert a partial block into the complete. Some writers advise its use when the auricle and ventricle are beating independently of each other, but even in these cases it is more apt to do harm than good.

Digitalis should be avoided in partial or complete heart-block.

In phasic arrhythmia, pulsus alterans and paroxysmal tachycardia, it generally fails to do good and may do much harm, as these conditions are seen in poisoning by this drug. In cases of extrasystoles, digitalis increases the irritability of the heart muscle and has the tendency to make the condition worse. Rarely do we see the premature contractions cease under its use. It is in auricular fibrillation that we see the most wonderful effect of this drug, for in the storm of delirious contractions that take place in the ventricle, in its attempt to obey each of the several hundred per minute that is sent down from the auricle, digitalis stretches out its hand and says, "Peace, be still," and a great calm follows. Not, however, from a quieting effect upon the auricle, but by blocking its impulses from entering the ventricle. Auricular fibrillation may be temporary or permanent. In the latter case the drug will have to be given at varying periods throughout life. This condition is the one great indication for digitalis, and it constitutes about 40 per cent of all cases of disturbed cardiac mechanism that are seen in hospitals.

We need not fear to use digitalis in cases with high blood pressure. Here again it is the functional condition of the heart that is considered. If this calls for digitalis, give it and often the high pressure will fall under the influence of this drug. The functional condition of the heart can be somewhat determined by the rhythm of the pulse, and we can often decide the use of digitalis by the pulse. Generally speaking, if the rhythm of the ventricle is regular, digitalis is of but little use. If the pulse is very fast, we may try it tentatively, watching its effect. If the pulse is slow, below 60, we should avoid digitalis. If an alternating pulse is present, digitalis, if used at all, should be watched closely. When the heart regularly beats fast, then slow (sinus arrhythmia), when premature beats are present (extrasystoles), when the ventricle beats in couples, or is regularly intermittent (partial heart-block), digitalis should be avoided. When the pulse is very irregular and in a state of delirium cordis,

use digitalis, for this generally means auricular fibrillation.

Summary.

The correct use of digitalis requires much skill and care. It requires a close study of drug and patient. It cannot be given by any thumb rule, for the weapon for good may easily be turned into a weapon of harm. It may be useless, beneficial, or harmful, depending upon the condition present. Its action varies not only with the preparation, which is of minor importance, but it varies with the cardiac lesion, which is of great importance. It is too slow in its action for emergency work unless given intravenously, when one dose may be given, but we must not forget that when given this way its effect is prolonged. Hypodermically it is much slower. It is disappointing in its effect on cases in which the rhythm is normal, but, although it may not alter the rhythm, it has a definite effect upon the heart muscle and vagus. Rest and dieting should always be tried first, and no patient should have it who is outside of his circle of functional capacity. It is not a diuretic, but it produces diuresis by overcoming venous congestion and improving the circulation. Its great use is in compensation broken, or impending, and in auricular fibrillation, which is associated in 60 per cent of these cases. As a rule, it should be avoided in the arrhythmias, especially when the pulse is slow. Its accumulative action should not be mistaken for heart conditions calling for more of the drug.

SCOPOLAMINE-MORPHINE ANAESTHESIA—DAMMERSCHLAF, OR TWILIGHT SLEEP.*

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The lay press has recently contained article on a wonderful new anesthetic in normal labors. The anesthesia is described, (I almost said, patented), under the name of Dammerschlaf, Demi-sommeil, or Twilight Sleep, ac-

*Read before the East Tennessee Medical Society.

ording as one gives the German, French, or English version. In common with other members of the profession, many inquiries have been addressed to me, as to what I thought of it. So I fell for the game, and bought a copy of Mr. McClure's monthly. "It is not injurious to the mother"—I read. To be sure, for that is a *sine qua non*, was my inward comment. "It is not injurious to the child, but on the contrary is of value, saving it from forceps, and in other ways." Fine, I thought, but you'll have to show me.

"By suppressing the respiratory centers of the fetus, it keeps the fetus from dying in utero, from swallowing amniotic fluid." So, it has remained for Gauss, with his *Dammerschlaf*, to correct this divine oversight for these thousands of years, or ever since the first loose leaf system was put into practice in the Garden of Eden. "The technique at Freiburg, once perfected, has never since required change." The same dose, then, is given all women, weak or strong, large or small, black or white, rich or poor, regardless of possible idiosyncrasy. An element of doubt began to creep in, as I digested this. One woman from California is so enthusiastic over the results of her first "twilight sleep" confinement that she would walk all the way to Freiburg, if necessary, to take advantage of it the second time. In view of the very unsettled traffic conditions at present, due to the war, my advice to this woman is that she had better start now, as it is a good long walk, and most of the way on water. Further, Mr. McClure's magazine says: "Obstetricians in Berlin are using forceps in 40 per cent of all labors." That is as it may be, but the Berliners have nothing on us, for some of our obstetricians can beat them to it every time by doing Caesarean section.

Furthermore, the magazine informs us: "Twilight sleep is, as may be seen, a very fine balance in the state of consciousness, and can be secured only under special conditions, and through special knowledge of the use of the drugs that cause it. These special conditions, and this special knowledge have been worked out in the Freiburg Hospital." The inference being, that these special conditions, and this special knowledge can only be obtained at Freiburg, and under the usual special condition

of dollars down first, and results afterwards. Now the article shows itself in its true light. It is only a horrid "ad." Confirmation of this comes a short time afterwards, with the announcement of, among other McClure publications, a book on "Twilight Sleep."

As for the article in the *Ladies' Home Journal*, I have to laugh when I recall one of Elbert Hubbard's pleasantries:

"Dead man (looking around in his coffin in the grave): It's not so bad here after all (pulls a *Ladies' Home Journal* from under his shroud and begins to read to the worms, which one by one roll over dead.)"

But seriously, such exploitation as this can only cause the profession at large to regard with unmixed disgust a method which they have already learned from experience to distrust. This method of anesthesia is neither new or wonderful. It has been put in the balance, weighed, and found wanting—at least such is the majority opinion both in Europe and America. But you don't have to take my word for it. Let us look at the literature on the subject.

It is to my mind very illuminating, and extremely significant that for nearly four years absolutely nothing has appeared in literature on this subject, save, of course, the articles above referred to in the lay press. In February, 1911, Lequeux published in a French journal, *L'Obstetrique*, a treatise entitled "Resume of the Recent Literature on Scopolamine-Morphine Anesthesia in Obstetrics." It is a very lengthy and exhaustive review and a summing up of the literature, which up to that time had been very voluminous.

This author gives the history of scopolamine, the development of its use, first in nervous diseases, then in surgery, and finally in obstetrics. Recent findings of numerous investigators as to the physiological and toxicological action of the drug are set out. He shows how scopolamine first used alone has come to be combined with morphine in varying proportions, the resulting anesthesia being called by Gauss and Kronig, "*Dammerschlaf*" or "Twilight Sleep." He studies the method from the point of view, successively, of the object, the dosage, the technique employed, and the results obtained by every author in their

chronological order. Finally he sums up, in every particular, the results obtained by thirty (30) investigators, including Gauss and Kronig, in nearly 5,000 cases. His conclusions are rendered the more valuable from the fact that they are drawn from such a large number of cases reported by a considerable number of different authors, as thus an equilibrium between enthusiasm and antagonism is struck, and the personal element in any one series of cases eliminated.

It has seemed to me that I could do no better than give you a translation of the conclusions arrived at in this classical paper. You all know the old proverb: "Mighty few souls are saved after the first twenty minutes;" so if my paper now seems a little disjointed and out of sequence, bear in mind, that I am trying to do my soul-saving in ten minutes.

Scopolamine-morphine anesthesia is not a new method, only an adaptation to obstetrics of a surgical narcosis which has already been tried and found wanting. Hocheisen says of scopolamine: Abandoned by the oculists, some have taken advantage of this to use it in obstetrics; but it was the alienists who first attracted attention to the drug, using it instead of the straight-jacket as a means of discipline. To Steinbuchel belongs the honor of having applied the method to obstetrics. He was the first to state that the narcotic action of small subtoxic amounts of these two poisons, scopolamine and morphine, is such that their toxic action is annihilated by their antagonistic power. However, if the method of sleep by scopolamine-morphine in labor has Steinbuchel for a father, it has Kronig for an apostle, and Gauss as an executor, who has christened it the method of "Dammerschlaf" or "Twilight Sleep."

That which obstetricians should seek to attain with this method, Steinbuchel tells us, is: 1. Suppression of the pains. 2. The retention of the normal uterine contractions. 3. If during the accouchement it is necessary to give an anesthetic by inhalation, the fact of scopolamine-morphine having been used, should not make the former any more dangerous or inconvenient. 4. The anesthesia must be without danger, for without this, it would be in-

comprehensible to wish to apply it to normal labors, and with the single object of lessening the physiological pains. 5. Through this anesthesia the child must not run any risk. 6. It must not cause any uterine inertia after fetal expulsion. 7. It must be easy for the physician to put in practice.

The fact that these two products can act with variable degrees one upon the other, explains sufficiently why the dosage has remained so long hesitating, and why even still at the present writing, we are groping in the dark, uncertainly. The widely varying results obtained by the different authors are sufficient evidence of this. ScM was given first by Steinbuchel and in the following doses: Scopolamine hydrobromate, gm. .0003 to gm. .0006 or gr. 1-200 to 1-100; chlorhydrate of morphine, gm. .01 or gr. 1-6; water c. c. 1.

The formula of Steinbuchel was the one most often administered. This author in caution at first only gave one-half of the dose above; later he began to inject a complete dose, and later still he gave two at one hour intervals. The largest doses have been given by Rezasens, who on one occasion gave gm. .009, or a little more than gr. 3-20 of scopolamine and morphine, gm. .005, or gr. 5-6, but later decided upon scopolamine gm. .003, or gr. 1-20, and morphine gm. .01, or gr. 1-6, with which he obtained satisfactory results and which he considers as a definitely medicinal dose. Bjorkenheim, in a recent work, gives the smallest doses, of course, compatible with getting results; he never surpasses seven injections in eight hours, with a total quantity of scopolamine gm. .00015, or about gr. 1-400; the smallest dose of the author and the usual dose being scopolamine gm. .00006, or about 1-1000 gr. Gauss has changed his dosage any number of times. At the present time he is using even smaller doses of scopolamine than Lequeux described. I am not reliably informed that he is using today the following technique and dosage. When labor is well under way, the pains coming every five to ten minutes and strong, he gives hypodermically scopolamine gm. .0003 or 1-200 gr. and narcophine gm. .03 or gr. 1-2. One hour later scopolamine gm. .0003, or gr. 1-200, one hour later still scopolamine .000015 gm. or gr. 1-400, and one hour

later scopolamine .00015 gm. or gr. 1-400; all depending on the memory test. If memory is still present at the end of three or four hours, narcophine is given in one-half of the original dose. The total amount of scopolamine given by Gauss then would be about gr. 1-66. Lequeux says of the dosage: As one sees it today, the average dose employed is that which Steinbuechel prescribed at the beginning of his researches, with a tendency towards a diminution of the morphine, which is blamed for the mishaps. Regarding the total quantity of the drugs injected, most of the authors are contented with one, two, or three injections of the formula of Steinbuechel. The injections are differently spaced at intervals, varying from a half hour to twelve hours, depending on the size of the individual dose, the effect obtained, and the length of the labor. Gauss considers as a maximum scopolamine gm. .0045 or about gr. $\frac{3}{40}$, but he advises not to exceed scopolamine gm. .003 or gr. 1-20 in one woman during the course of the labor.

Steinbuechel used as a guide in his injections, the perception of pain, but Wartapetian was one of the first to show the difference of individual reaction to this means. Bass tried to base the dose on the degree of pupillary dilatation, the appearance of ataxia, and the test of memory, but he considers these means inconstant, for he has seen ataxic phenomena occur in full awakening, with persistence of pain and inversely; so he advises to let the pains reappear before making a new injection. Link and Reuter based the dose on the disappearance of the reflexes, but Roith says the limit of tolerance is attained much earlier. Kronig and his pupil, Gauss, say to measure the dose of medicine by the memory test, and not by looking for the intensity of the pain. The memory test consists in the following: It suffices, says Kronig, to present to the patient some object, always the same, during the test, every thirty or forty minutes, and to ask her whether or not it has been shown to her before; it is necessary to gauge the activity of the medicine that the woman should designate the object by its name, but she should not remember to have seen it before. This test should be repeated during the entire time of the accouchement.

To this test of memory, Gauss and his partisans attach a very great importance, and the blame which they put upon the detractors, Hocheisen, Bardeleben, Steffen, and many others is exactly that they have observed the rules badly. Hocheisen replies that this method is clumsy, and cannot be of any use. Steffen states that the ordinary practicing physician is not in a position to establish this test in a continuous and exact manner. Lequeux says of this test: Aside from the test of memory, the practicability of which is contestable, we do not have at the present hour any criterion capable of guiding us in the administration of scopolamine-morphine.

Gauss insists upon the necessity of keeping the woman in the greatest quietude during the anesthesia. He says to put cotton in the ears, smoked glasses on the eyes, and I am reliable informed, isolates the patients in a padded room, the attendants having rubber-soled shoes; it is also necessary, he says, to avoid daylight, and to cover the figure with opaque linen. Silence is indispensable, the cries of other parturients and of babies are very prejudicial to the happy outcome of the procedure. The ears can be stopped with the antophone, or packed with cotton soaked in oil. The baby should be removed from the mother immediately after birth, as it will cry and wake her up. When the woman comes out of her sleep, it is well that the doctors should use caution in announcing to her the happy issue of the delivery. It is necessary to have an intelligent nurse, and that she should have the care of only one woman at a time, or rarely two, at the most. Private patients, finally, with this method should be confined not at home but in a hospital. This is practically the only restriction which Gauss and Kronig place upon the use of their method, and they did not at first admit even this. Hocheisen remarks upon how difficult it is, even in hospitals, to isolate the patients, and in the city it is almost impossible. Attendance on the woman has been differently interpreted; some advocates of scopolamine-morphine consider that its use does not compel one to remain near the parturient; most of the authors on the contrary, however, enforce a constant attendance from the first injection till complete awakening. According to Mayer, it is a hospital procedure,

with medical control, which could not be obtained in private practice. It is in short, impossible also, in the home of the parturient, to remove her and the baby from the influence of the neighborhood as long as they are under the influence of scopolamine. On the other hand, the private physician cannot be expected to abandon his other practice, beginning with the first injection and lasting up to the end of the labor.

All authors following Gauss insist on using a good preparation of scopolamine. Kleinertz demonstrates very variable actions in individual specimens, which he attributes to a chemical inconsistency of the product. Fresh solutions, he says, can be without action, and old solutions can be very active. But as variations can obtain likewise in the individual person, it is advisable not only to always test the solution of scopolamine, but also to try out the sensitiveness of the particular woman in the experiment.

The conclusions of Lequeux as to the object of the method, the dosage, and the technique, are as follows: It is a delicate method, which requires much caution and which obliges a constant attendance; it is only utilizable in hospital practice and cannot be entrusted to general practitioners. It is difficult to establish the dosage, since its use is based upon the antagonism of the two substances which compose it, but it is impossible for these substances to neutralize each other completely. Morphine seems to bear the heaviest load of blame, but scopolamine alone gives symptoms of a more or less serious character.

As one sees it today, the average dose employed is that which Steinbuchel prescribed at the beginning of his researches, with a tendency towards a lessening of the morphine. Aside from recognized exaggerations, every one is in accord not to exceed scopolamine gm. .001 or gr. 1-60 and morphine gm. .01 or gr. 1-6. With this dose the desired effect is not always attained, but if it is exceeded one runs the risk of provoking disaster.

The results obtained with the scopolamine method should be studied from several points of view:

1. From the point of view of the general action. 2. From the point of view of the local action; on the intensity of the pains, the

progress of labor, the period of expulsion, the muscular action of the uterus and the abdominal wall, the delivery of the placenta, and the puerperium. 3. From the point of view of the child.

As to the general action of scopolamine-morphine, the authors differ only in regard to the extent of the action of the drugs. Not a single author has failed to get some symptoms of the general effect of scopolamine-morphine, and in some instances death. Hocheisen and Bardeleben insist upon the toxic action of scopolamine-morphine. They say that it is a cardiac and pulmonary poison, and also has a harmful effect upon the kidney. They each report a death of a mother due to scopolamine-morphine. They get such symptoms as cyanosis, epistaxis, nausea, vomiting, a severe headache, delirium of varying degrees, arrhythmia, lowering of the rate and decreased depth of the respirations, grave anemia, and pulmonary congestion. Gauss, on the other hand, claims that at the most he only sets up, from the point of view of the general manifestations, an intense thirst, ataxia and embarrassment of the speech. He says he has never seen arrhythmia but once, and that in an arterio-sclerotic patient. He has used it, he says, in 25 women affected with organic heart lesions, and has never had any symptoms. He admits that the respirations can be more profound, and diminished in number, but never irregular or precipitate. He ends thus in one of his articles: Death is a possible accident, but it is probable that in this case one has had recourse to the method of complete sleep, which is not the same thing as the half sleep. It is also possible to have individual intolerances, of the nature of idiosyncrasies, but this is likely very rare, since he has never observed it in several thousands of cases.

Lequeux in summing up says:

Most of the authors have observed, in different degrees, a general exciting action, with cardiac and pulmonary manifestations. The benign symptoms, almost habitual, are especially marked by dryness of the skin and mucous membranes, with diminution of the glandular secretions, mydriasis more or less marked, excitation more or less accentuated, and elevation of the pulse. The grave symptoms, with which one cannot reckon, are, especially, de-

lirium, enfeeblement of the heart, and phenomena of pulmonary asphyxia of variable intensity. Individuals react in an unequal fashion and cases of idiosyncrasy, always unforeseen, are to be feared. One milligram or gr. 1-60 has caused death, and Roith has observed in surgery one case of death with a dose of gm. .0003 or gr. 1-200.

Of the local action of scopolamine-morphine, Lequeux says:

It is a very difficult matter for us to sum up in a table of the whole the conclusions of authors as to the local action of scopolamine morphine. We can only point out the optimism of some who do not find any criticism to make of the method of Gauss. Aside from these, numerous detractors reproach him for only soothing the pains imperfectly, and of bringing about rather an obliteration of memory rather than an absence of perception; the woman is confined as though in a delirium. The fact remains, however, that scopolamine-morphine acts often in an unfavorable fashion upon the uterine contractions, it ends too frequently in the partial or complete abolition of the abdominal contractions, and from this fact, it prolongs the period of expulsion, predisposes to interventions of extractions, favors inertia, and its harmful consequences, hemorrhage of placental delivery. It seems without action upon the puerperium and on lactation.

From the point of view of the action of scopolamine-morphine upon the child, the statistics of all the authors show symptoms varying from a state of torpor or drowsiness, designated by Kronig and Gauss as oligopnea, to asphyxia, apnea, and death. Further than that, several authors have reported fetal deaths occurring on the fourth, fifth, or even ninth day, after a period of apparent well-being. Gauss gives the results for the child in his first 1,000 as follows: Normal infants, 70.5 per cent; oligopnea, 18.1 per cent; asphyxia, 9.6 per cent; born dead, 1.5 per cent; infants dead before labor, .7 per cent; infants dying during labor, 2 per cent; infants dying before the ninth day, 1.4 per cent; making a total of 3.8 per cent, or 38 infants having died in the child-bed period. It is true Gauss claims only six of this number of 38 is due to scopolamine-morphine. If we accept this explanation of the figures by Gauss, his mortality is low, and

in no way approaches that of any of the other investigators; as Preller reports infant mortality of 1 per cent; Hocheisen, 4 per cent; Hatcher, 9.8 per cent; Steinbuechel, 10 per cent; Puschnig, 15 per cent, and Bass, 18 per cent. It is also true, however, that the above figures do not give the mortality due to scopolamine-morphine, but it does show in every case a relative increase over the usual fetal mortality, and this permits of only one interpretation, either that the increase is due to scopolamine-morphine, directly or indirectly, through its effect upon the mother in many ways.

Lequeux in summing up:

The results of the method of Gauss as it concerns the infant are far from encouraging. A great number are born in a state of torpor or of sleep called oligopnea; some even do not show any respiratory movement for many minutes. Asphyxia is too frequent, and the infants in these cases are more or less easily resuscitated. Finally, however, there are no authors whose statistics do not contain some fetal mortality. Although by a more or less subtle subterfuge the percentage of mortality or lethality may be taken away from scopolamine to be put to the account of an accessory cause, such as duration of labor or intervention, it is nevertheless true that the figures remain entirely too high, and it is this fact, we do not doubt, which bears the heaviest reproach, at present, upon the method of Gauss.

In conclusion, Steinbuechel, Kronig, Gauss, and Weingarten are the great advocates of the method. They have fortified themselves in the following position: Scopolamine-morphine brings about, says Weingarten, an evident lessening of the pains, and without influence upon the consciousness of the woman, sets the pains in order, and does not weaken the contractions of labor. There is never any fetal intoxication, even when it is associated with another narcotic. Steinbuechel adds that it is a means of anesthesia which sums up the advantages of other means, without any of the disadvantages.

Beruti is still optimistic of the method, although in 600 cases he has had two deaths of mothers and eleven deaths of infants.

On the other hand, Hocheisen, the great adversary of the method, says: It is as dangerous a method for the mother as it is for

the infant. One has too much the impression that the woman is poisoned, and accidents and symptoms are numerous. Scopolamine-morphine is a cardiac and pulmonary poison; it acts unfavorably upon the progress of labor, which it prolongs, it paves the way for hemorrhages through inertia, and finally it menaces the infants with asphyxia or apnea.

Bumm, who instigated the researches of Hocheisen and Bardeleben, probably expresses the general opinion of the German accoucheurs. He states that scopolamine-morphine has a bad action upon the uterine muscle and upon the muscles of the abdominal wall, and this is, by no means, the only harm it does. The method of Gauss is impracticable, in his opinion, because it is impossible for a doctor to remain at his patient's bedside for the entire duration of the labor, from the first injection, watching for the moment to interfere at the first danger, which will not fail to come.

According to Lequeux, Van Hoesen, of Chicago; Newel, of Boston; Hatcher and Smith, among the Americans, are more or less favorable to the method, and Ruthven-Lawrence and Scheill among the English, likewise.

Lequeux says in conclusion:

All of the authors unite in recognizing the method as one of very variable effects, that there are cases of idiosyncrasy which nothing can explain, and that the same solution gives very different results according to the individual, and finally, that they have all had deaths to deplore, both fetal and maternal.

This should incite us anew to pursue clinical investigations, which conducted with caution, will allow us, perhaps, to better understand, and to better measure the antagonistic action of these two products, scopolamine and morphine, with the end of protecting the lives of women and children. We will possess then, let us hope, a harmless product with which we would see the pains of labor disappear or become lessened.

THE TREATMENT OF DIABETES AFTER THE METHOD OF ALLEN.*

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As no mention of recent progress in the treatment of diabetes has been made in this Journal I feel I may well spend the space allotted me in a consideration of this fascinating condition. During the past year F. M. Allen, of the Rockefeller Institute, has given what promises to be the most profitable impetus to the study of diabetic therapy since the time of Rollo. As a result of Allen's experimental and clinical work and the confirmation of his conclusions by Joslin and others, this method of treatment is now being used in all of the large Eastern clinics.

The view most widely accepted as the explanation of this disease is that the disturbance in carbohydrate mechanism is a result of diminution or alteration in the internal secretion of the pancreas. In support of this is the presence of glycosuria in some cases of pancreatic disease, and the fact that the Islands of Langerhans show degeneration, or at least a deviation from the normal in possibly one-half of cases of diabetes coming to autopsy. Another fact supportive of this theory is that partial pancreatectomy in animals results in a condition almost identical with diabetes as encountered in man. It was in the treatment of these experimentally produced cases that Dr. Allen first applied the principles of what is now known as the Allen treatment.

The presence of glycosuria in hyperthyroidism and hyperpituitarism, and following injections of suprarenal extract, is the basis of the so-called pluri-glandular theory of the causation of this disease. Cushing has shown that hypertrophic or irritative lesions of the posterior lobe of the pituitary result in a lowered sugar tolerance, and destructive lesions result in an increase in the carbohydrate tolerance of the individual. The well known fact that hyperthyroidism lowers sugar tolerance and may even produce glycosuria supports this

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theory and we are warned that it is dangerous to treat obesity with thyroid extract. The influence of adrenalin on sugar metabolism has influenced Crile to remove the suprarenal in a diabetic patient.

Whatever the cause, or causes, of diabetes, for it is improbable that all cases have a common etiology, all cases giving the reaction for sugar in the urine should be considered diabetes mellitus until most carefully studied. It is criminal, to my mind, to assure a patient that he has nothing but a little alimentary glycosuria just because he has no symptoms other than the presence of sugar in the urine. This individual may go for years, if he is over forty, in what is apparently perfect health and then suddenly develop severe diabetic symptoms and pitch down hill at an appalling speed. It is our duty to institute treatment early, and impress the patient with the serious possibilities of his condition if he does not co-operate in every way with his physician. He should be taught to examine his own urine after it becomes sugar free, and permanent sugar freedom and absence of acidosis should be insisted upon if any arrest of the condition is to be secured. Allen recommends that the urine be examined one hour after each meal. This is done by the patient, and, if he has failed to follow his prescribed diet, the presence of sugar will quickly bring him to time. By this simple procedure much of the previous difficulty of keeping the co-operation of the patient is overcome. Joslin states that no patient whom he has taught to examine his own urine in the past year has died. Not only should the patient be taught the use of a sugar testing solution, but he should also be able to perform the simple ferric chloride test for diacetic acid. In this way we safeguard our patient from coma and we are able to maintain more readily the state of permanent sugar freedom. After tolerance for various foods is ascertained and proper diet instituted, the patient may go where he pleases and be away from his physician for months with safety, because he is able by his tests to realize when all is not well and his physician needed.

The only treatment of avail in diabetics has always been dietary. Drugs have never given results except opium, and I wonder which is worse, diabetes or morphinism, or, as I have

always seen it, both together. The Allen treatment is dietary purely, and let it be understood that this is advisedly called *treatment*, and is not exploited as a *cure*. Whether or not it will cure cannot yet be said. Personally, I am convinced that many early cases of so-called acute diabetes can be practically cured. I have such a case under treatment at present, and although he has only been free from sugar for a few months his tolerance of carbohydrate food has shown a decided gain. A majority of all cases except the most severe will, I believe, show some increased tolerance, and practically all cases will be freed from troublesome symptoms and live longer than if not given advantage of this treatment.

The general principles of the Allen treatment are the establishment, by fasting, and the continued maintenance, by proper dieting, of freedom for glycosuria and acidosis, along with a permanent reduction in body weight. The treatment itself is really a scientific application of the time-honored surgical principle of REST. Its object is *rest of the diseased function* and subsequent care not to over tax it. In this way it is hoped that those factors which have to do with sugar metabolism will rally, and, if care is taken not to overtax them, they will to some measure recover their original vigor. Freedom from sugar is accomplished by fasting. This, in a normal individual results in the appearance of acid bodies in the urine. In diabetics the converse is true and fasting actually diminishes existing acidosis. By older methods reduction of sugar was accomplished by gradual reduction of the carbohydrate food elements. On a fat-protein diet these patients often developed acidosis. The source of these acid bodies is believed to be due to imperfectly metabolized fat. All the body forces are needed to split up the protein injected, a considerable per cent of which it is necessary to convert into sugar to take the place of what would have been present in a balanced diet. That the sudden institution of a fat-protein diet is dangerous I have recently had forcibly impressed upon me. A boy of fifteen years, well nourished, apparently in good health, except that he complained of polyuria, excessive appetite, and thirst. The family physician was consulted, sugar was found and carbohydrate interdicted. Unlimited fat-

protein diet was allowed. Ten days later this patient was sent to a local hospital in coma, with sugar, acetone, and diacetic acid in his urine. Death resulted in thirty-six hours. No test was made for acid bodies in the urine before treatment was instituted. It is impossible to say what the outcome would have been had this patient been treated by starvation when first seen by a physician, but we do know he could not have fared any worse, and that the incidence of coma in cases treated by the Allen method has been exceedingly rare—so rare indeed that Joslin is authority for the statement "that coma no longer represents the culmination of this disease, but is an avoidable accident."

The Method of Allen.

The patient is placed in a hospital and allowed regular diet for forty-eight hours. The twenty-four hour urine is collected each day and careful physical examination noted. Daily weight is recorded. Fasting is now instituted. Water as desired and two cups of coffee or tea without sugar or cream are given. If acidosis is present, small amounts of whiskey are given every three hours. This serves as a food, but does not produce glycosuria. On the second or third day eight ounces of clear broth are given during the twenty-four hours. The majority of cases become sugar free at the end of a two or three days' fast. The longest fast reported has been nine days. When the twenty-four hour specimen is free from sugar, feeding is begun. The first day after sugar freedom is established 200 grams of green vegetables which contain five per cent or less of carbohydrate are allowed. The following table of Joslin gives the average percentage of carbohydrate in common vegetables:

Foods arranged approximately according to per cent of carbohydrates:

VEGETABLES.

5 Per Cent.

Lettuce	Cauliflower
Spinach	Tomatoes
Sauerkraut	Rhubarb
String Beans	Egg plant
Celery	Leeks
Asparagus	Beet greens
Cucumbers	Watercress
Brussels Sprouts	Cabbage
Sorrel	Radishes
Endive	Pumpkin
Dandelions	Kohl-rabi

Swiss chard
Sea kale

Onions
Squash
Turnip
Carrots

Green peas
Artichokes

Potatoes
Shell beans
Baked beans

Broccoli
Vegetable marrow

10 Per Cent.

Okra
Mushrooms
Beets

15 Per Cent.

Parsnips
Canned lima beans

20 Per Cent.

Green corn
Boiled rice
Boiled macaroni

FRUITS.

Ripe olives (20% fat)
Grapefruit
Lemons
Oranges
Cranberries
Strawberries
Blackberries
Gooseberries
Peaches
Pineapple
Watermelon

Apples
Pears
Apricots
Blueberries
Cherries
Currants
Raspberries
Huckleberries
Plums
Bananas

NUTS.

Butternuts
Pignolias
Brazil nuts
Black walnuts
Hickory
Pecans
Filberts
Almonds

Walnuts (English)
Beechnuts
Pistachios
Pinenuts
Peanuts
40 Per Cent.
Chestnuts

MISCELLANEOUS.

Unsweetened and unspiced pickles, clams, oysters, scallops, liver, fish roe.

Reckon actually available carbohydrates in vegetables of 5 per cent, group as 3 per cent, of 10 per cent group as 6 per cent.

	Pro.	Fat	Grams	Cal.
Oatmeal, dry weight	5	2	20	110
Meat (uncooked)	6	2	0	40
Meat (cooked)	8	3	0	60
Broth	0.7	0	0	3
Potato	1	0	6	30
Bacon (cooked)	5	15	0	155
Cream, 40 per cent	1	12	1	120
Cream, 20 per cent	1	6	1	60
Milk	1	1	2	20
Bread	3	0	18	90
Butter	0	25	0	240
Egg (one)	6	5	0	75
Brazil nuts	5	20	2	210
Orange (one)	0	0	10	40
Grapefruit (one)	0	0	10	40
Vegetables, 5-10 % groups	0.5	0	1	6

1 gram protein, 4 calories.

1 gram fat, 9 calories.

6.25 grams protein contain 1 gram nitrogen.

30 grams (g) or cubic centimeters (c. c.), 1 ounce.

A patient "at rest" requires 25 to 30 calories per kilogram body weight.

1 gram carbohydrate, 4 calories.

1 gram alcohol, 7 calories.

1 kilogram, 2.2 pounds.

If the urine remains free from sugar the carbohydrates are gradually increased until the patient receives three grams per kilogram body weight. If sugar appears, and it usually does long before this point is reached, a fast day is instituted and for some time following carbohydrates are kept well below this point.

On the second day after the urine becomes clear, two or three eggs are given and proteins are gradually increased until the individual is getting three-fourths to one gram of protein in the form of eggs and meat per kilogram body weight. Along with the protein, fat is given in small quantities until the protein reaches one gram per kilogram. From this point fat is increased more rapidly until the patient ceases to lose weight or the fat equals four grams per kilogram body weight.

The appearance of sugar is the signal for starvation and more rigid restriction of diet. Fast days or five per cent vegetable days are prescribed once or twice a week, depending on the severity of the case.

As an adjuvant to fasting, exercise has been found to increase sugar tolerance and is sometimes used to shorten the fasting period in robust individuals. Many of our diabetic patients must earn their living and can ill afford a long absence from business, so we allow them to go back to work as soon as a suitable diet is worked out and strength has returned.

The patient's weight, if not already below normal, falls during fasting and the period of restricted diet. This is usually desirable, and a permanent reduction of ten or more pounds, depending on the case, is insisted upon. This condition of under-weight has been proven to increase the individual's tolerance for sugar and is one of the important factors in the Allen treatment.

The following diet serves as an illustration of the above principles as applied to one of my own cases with a carbohydrate tolerance of 40 grams:

Breakfast.

Small oranges or one-half grapefruit.
Eggs, 2.
Bacon, 50 grams, 3 slices, 6 in. long.
Two bran cakes.
Butter.
Cream.
Coffee.

Dinner.

Steak, 100 grams, 1 slice.
Lettuce, 100 grams, 12 leaves.
Spinach, 100 grams, 2 h. tbsp.
Two bran cakes.
Butter.
Cream.
Tea.

Supper.

Cold ham, 50 grams, 1 small slice.
Asparagus, 50 grams, 1 h. tbsp.
String beans, 100 grams, 2 h. tbsp.
Two bran cakes.
Butter.
Cream.
Tea.

Allow During Day:

Butter, 40 grams, 4 squares.
Cream, 40 per cent, 8 ounces, 16 tbsp.
Bed-time salad.
Lettuce and Asparagus salad.

The above diet is bulky and satisfying, and it is surprising how much patients enjoy it and how little craving there is for bread, etc. Substitutions can be made from day to day to furnish variety. Bread is rarely used because it is often badly tolerated and it is so easy to exceed the amount prescribed. Gluten breads are unreliable and never used. The following bran biscuit is used at the Rockefeller Institute:

Bran	-----	60 grams
Salt	-----	$\frac{1}{4}$ teaspoonful
Agar-Agar (powdered)	-----	6 grams
Cold water	-----	100 c. c.

Directions—Tie bran in cheese cloth and wash under tap until water is clear. Heat agar-agar in water (100 c. c.) to boiling point. Add washed bran, salt, and hot agar-agar. Mix and mould into two cakes. Put in pan on oiled paper and when cool and firm bake in oven 30 or 40 minutes.

The above furnishes a good substitute for bread and corrects constipation, which is so often present in these cases.

It is extremely important that the diet should be increased very gradually after starvation. In severe cases, a diet of twice or thrice boiled vegetables gives the desired bulk to a meal and lowers the carbohydrate content of the food to 50 per cent of that given in the table of values.

In the light of my present experience and the case reports I have had opportunity to study, the following conclusions as to the value of the Allen treatment seem justifiable:

(1) The starvation treatment of diabetes accomplishes sugar freedom more quickly and certainly than any previous method of treatment.

(2) The presence of acid bodies in the urine is diminished by starvation in the diabetic individual.

(3) Moderate reduction in weight favorably influences tolerance for carbohydrate foodstuffs.

(4) Exercise diminishes glycosuria.

(5) Teaching diabetics to examine their own urine insures co-operation with the physician and reduces the incidence of coma in this disease.

(6) Unlimited intake of fat is dangerous in diabetes.

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THE CERVICAL TEAR.*

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A careful study of the literature on the "Cancer Problem," especially that of recent date, cannot fail to impress upon the thoughtful student three great facts:

First. The inseparable connection between cervical tears and carcinoma of the cervix.

Second. The importance of teaching the people at large the great danger of delay in consulting a competent physician when certain unnatural symptoms arise.

Third. The importance of having physicians able to recognize early the symptoms of oncoming cancer of the cervix, and courageous enough to insist upon proper treatment.

That the relation of the cervical tear to carcinoma of the cervix is well defined, and often the prime factor in the causation of this disease is indisputable, and that proper attention to cervical tears, at the proper time, would diminish the cases of cervical carcinoma is also a fact beyond dispute. What, then, is our proper attitude toward cervical tears. Let us look at some recent carcinoma statistics.

It is estimated that 75,000 people die each year in the United States from cancer; that one in eleven of all men, and one in eight of all women, 35 years of age and upward, eventually die of cancer. The majority of observers are of the opinion that cancer is on the increase, and that with the present increase of cancer and decrease of tuberculosis, in the year 1931 the cancer mortality will surpass that of tuberculosis. Out of one hundred cases of cancer of the uterus applying at the Vienna Clinics, 85 per cent were inoperable, and in thirty-four cases the patients had had, to their knowledge, signs of an average duration of from eight months to a year before seeking surgical aid. It has been the experience in some of our largest clinics, during the period of the last ten years, that for every case of cancer coming early enough for an operation which justified removal of the uterus, there were sixteen cases that came too late; in some clinics, a ratio of one to twenty-one.

Every labor causes more or less injury to the cervix, since even a normal uterus cannot stand the enormous radial dilatation necessary for the passage of the child. This being true, every woman who has borne children has an injured cervix, and in a large number of cases this injury consists of frank tears. To repair these tears at the time of delivery is most always out of the question. It is the necessity of repair later on to which we should turn our attention.

When a woman who has borne children approaches the cancer age, viz., 35 to 50 years old, she should be impressed with the necessity of going to her physician for a complete physical examination. Indeed, one examination is not enough, but at certain intervals throughout the period mentioned complete

*Read before the Knox County Medical Society.

medical examination should be sought. This statement applies to the unmarried and to the non-child-bearing woman, also, as grave results can occur with them, as with the child-bearing woman. Dentists are consulted regularly in order that beginning decay of the teeth may be sought out and corrected. How much more important it is to seek medical examination regularly during a period that holds the enormous death rate of one woman in every eight. Our duty is plain—that we become teachers of the people with whom we come in contact, that we urge prompt action, and explain the dangers of delay.

What, then, is the significance of the cervical tear to the examining physician? Strange as it may seem, some well-meaning physicians fail utterly to recognize the importance of these tears, and either through inertia or ignorance fail to advise surgical measures, the one and only dependable course. Instead, often, indifferent examinations are made, courage of one's convictions is lacking, an uncertain stand in the case is taken before the patient, no definite course of procedure is outlined, and consequently the patient goes away unbenefited.

The first symptom usually complained of by a woman who watches herself carefully is a slight bad-smelling leucorrhea, a small amount of bleeding after coitus, or a slight spotting of the clothes between periods. Such a history demands an immediate and painstaking examination on the part of the physician, holding ever **first** in his mind the possibility of cancer. Cervical tears should be looked for, also gangrenous polyps extruding from the cervix, neglected gonorrheal infections, dermatitis of the vulva and venereal warts.

The significance of the cervical tear in cases presenting the symptom of bad-smelling leucorrhea is unquestioned, especially if the tear is bilateral. In this event the lips of the cervix will usually be found everted and inflamed, and the cervix filled with numerous small, hard, discrete, well-defined tumor masses. The uterus will be enlarged. The

cervical tears, covered by Nature with fibrous tissue to fill in and heal them, are pulled gradually open by the contraction of the fibrous tissue as it reaches the adult type. Thus the cervical mucosa, normally bathed by an alkaline secretion, is exposed to the irritating acid secretions of the vagina, with resultant inflammation. The inflammation, in turn, causes erosion of the cervix, and eventually closes the ducts of the Nabothian glands, causing retention cysts in these glands. The picture is now complete—tears, fibrous tissue, eversion of the cervical lips, irritation, inflammation, erosion, retention cysts. Carcinoma could find no more welcome field upon which to begin its growth, and hardly, indeed, a more dangerous field. Second only to carcinoma of the stomach, carcinoma of the cervix each year exacts an enormous toll, while we as practitioners, as family physicians, look complacently on. It begins always as a simply local lesion, amenable to good surgical treatment at this time, with a promise of complete eradication. To be indifferent to the torn cervixes we see, to ease our consciences by applying local treatments to the conditions they bring about, to forget or ignore the diagnostic and prognostic importance of the initial leucorrhea, is but to incriminate ourselves as physicians and to stand forever culpable before a scientific world.

Tears in the cervix, and their sequellae, are of importance for the reason that the cervix is more richly supplied with lymphatics than any other part of the uterus. This is an anatomical and physiological fact relating to cervixes elsewhere in the body, as those of the urinary bladder, gall-bladder, pylorus, mouth and anus, and thus early metastasis is to be expected following carcinomata in these regions.

Following leucorrhea, the next symptom in importance calling attention to the cervix is bleeding, and should never fail to cause a thorough digital and visual inspection. To the shame of our profession, be it said that many times a woman, suffering from bleeding

even after the menopause has been thoroughly established, and asking advice and relief from her physician, is told by him, often without examination being made, that such is a natural occurrence in women of that age, and therefore to be expected in her case. She is given a tonic, told to use occasional douches, and assured she will eventually be all right. Under such conditions, if the patient accepts this opinion as final, she goes forth, in all probability, to die a cancer death some months or years later, a victim to the inertia and indifference of her doctor.

I will not touch upon the differential diagnosis between early carcinoma of the cervix and various other conditions of the uterus causing bleeding, such as fibroids, polypi, hyperplasia of the various layers of the uterus, etc. Suffice it to say that every condition presenting this symptom demands a thorough examination. Watery discharge, cachexia, pain are symptoms occurring too late to offer hope of relief.

To the early symptoms, therefore, we should devote early and earnest attention. It would not be far wrong to have all cervical tears repaired just as soon as the child-bearing period is over. It would at least be a prophylactic measure worthy of acceptance in all such cases, but one that will hardly become generally adopted. The lesson for us all, however, is to be constantly on the alert for symptoms arising from cervical tears, to recognize early the importance of these symptoms; to make painstaking examinations of the cervix, both digital and visual. If tears are present, especially in the treacherous period of a woman's life, to advise and insist upon good surgical treatment; to explain to our patients the deadliness of delay, and the utter uselessness and folly of procrastination. To appropriate for ourselves all knowledge and experience of other physicians that are available, and endeavor to burn into our very hearts the awful picture that comes of delay in recognizing early the symptoms and acting promptly in the management of cervical tears. Then, and then only, can we, as physicians, feel that we have done our duty.

THE CURSE OF THE SERPENT.

By S. M. Miller, M.D.,
Knoxville, Tenn.

"Because thou hast done this, thou art cursed above all cattle, and above every beast of the field, upon thy belly thou shalt go," etc. (Gen. iii:14).

In the analysis of a subject so unique, at such departure from ordinary human experience—a subject so replete with varied suggestions, it almost seems the thoroughfare is still guarded by the flaming swords of the Cherubim. Archeologists, anthropologists, and philologists have lent their aid to students of inspiration and legend in penetrating the mists of so remote a period, until now a younger sister of the scientific family, with her tiny torch, appears to lighten the way, if but a very little, in so recondite an undertaking. Comparative morphology, this newer study, embracing of necessity the consideration of animal and human embryology, anatomy and physiology, presents some incidental inquiries, maybe, well worth while to pause and inspect.

Parenthetically, the matter of the serpent being obliged, after his condemnation, to go upon his belly—the statement carrying with it the assumption that previously he had gone in some other way—will be reckoned literally, and not allegorically, as is so frequently done. Choice is made of the former, for the reason that such transcendental speculations, as the latter, are far too subtle for any except for schoolmen. In this anthropomorphic inquiry the meaning is intended to embrace the wider scale of evolutionary upbuilding and progressive improvement, as against deterioration and decline. A further occasion arises in the study of health and disease conditions, difficult of understanding upon any other hypothesis. Such legitimate review should not provoke hostile antagonism between those of a rationalistic temperament and such as acquire their intellectual holdings from hereditary authority, supernatural disclosures, or the composite records of by-gone ages. "A mind so constituted as to be capable of apprehending other than material

manifestations, finds the strongest support of its logic in mystic revelations, and unusual phenomena are referred to supernatural agencies because it is more simple and easy of understanding and belief than the intricate theories of science." In this scintillating interplay of intellectual activities speculations of the first class are almost purely secular, while the latter is content to rest its case upon the unseen and miraculous. "Events belonging to the distant past are not realized with the same vividness as contemporaneous occurrences; they are so obscured by the haze of remoteness as to refract the imagination and distort its pictures." An effort to disclose the historic basis of many of our cherished traditions shows how they are a part of the sacred lore of ancient peoples, as the Chaldean, Assyrian, Phoenician, Egyptian, and others—traditions presenting points of similarity of construction and meaning that indicate an ancient and common origin; any other view seems the "despair of historians and commentators." From such remote beginning they have drifted down the current of the ages, becoming, in course, the properties of Grecian, Hebrew, Roman, Saracenic, and more modern nations. Each possessor of a borrowed or inherited theory of natural phenomena not otherwise understood is prone to appropriate it as an exclusive stock and guard it with the strength of an organized hierarchy. "It is a common observation that thinking men question extraordinary events except such as are connected with the theology, political party, or social organizations in which they happen to be born." This acquiescence in the conventional practices of society has greater influence than any other one cause in retarding progress. It emphasizes the curse, keeps the serpent upon his belly and compels him to "eat dirt all the days of his life."

In zoological classifications of the animal kingdom, the bird family ranks between the reptilia and homo sapiens, but for purposes of easy illustration typical classes will not be followed, but a comparison attempted between closer related groups, to-wit: the biped and quadruped classes. A superficial inspection of an individual of the first will disclose

morphological faults subjecting it, when considered alone, to diminished chances in the struggle for existence as against his fellow on the lower plane. In the upright position, the important structures of the head, neck, chest, abdomen, inguinal spaces and inner aspects of the extremities are exposed to incidental traumatism from every rough contact of life, while his quadruped kinsman enjoys a protection as if by provisional design, or, in other words, environmental adjustment to chance contingencies. With the animal on all fours, the brain strongly guarded by the massive frontal, the firmly braced and flinty temporal, and the projecting buttress of the facial bones; the vessels, nerves and other structures of the neck only slightly covered in front by soft tissue, are admirably located out of harm's reach; the chest and abdomen likewise enjoy a position the least exposed to injury from without, being surrounded anteriorly, laterally, posteriorly and from above by massive muscular and osseous ramparts. The inguinal regions are housed between the limbs and body so securely as to be well out of the way of ordinary accident. The mammary glands of the female and the external genitals of the male are just as favorably situated in the quadruped, and just as unfavorably in the pithecoïd "Four Hundred" above. This arrangement necessitates on the part of the erect class extraordinary advantages incident to his advancement along the scale, to compensate or exceed these handicaps entailed by the evolutionary modifications in process of development.

Your attention will next be directed to the reproductive organs. In the quadruped these structures are so admirably arranged that but a single exercise is ordinarily sufficient for fertilization, whereas in the biped the number of fruitless copulations is enormous. This functional difference is largely due to the influence of gravity on the parts.

In the quadruped the fundus of the uterus points forward and downward, and the expanded extremity of the oviducts are beneath the ovaries like open cups for the reception of a fluid. The blood vessels and lymph channels are on a line with the horizontal plane of the body; in the erect individual this order

is reversed, in that the fundus is forward and upward, and the fimbriae of the tubes above or lateral to the ovaries. In the first group the germinal cells effect a meeting under the simplest mechanical influence, while in the latter auxiliary expedients have to be provided, e. g., the mucus surface currents set in motion by the ciliae of the endothelium and the self-propulsive activity of the spermatozoon. In addition the circulation, vascular and lymph, is so impeded as to favor a more or less constant hyperengorgement leading to the pseudo function of menstruation, a phenomenon not present except in anthropoids and the female of the human family. A list of pathological aberrations arise in consequence of this changing relation of parts—such as displacements, congestions, subinvolutions and easy abortions.

Review next the vascular system. Physiologists tell you that in the thin-walled veins valves are provided to prevent, in a measure, the reflow of the blood streams or a stasis of the onward current—an arrangement not necessary in the elastic thicker arteries. Take an animal of the four-footed family, and in every vein that sends its current in a vertical direction valves are provided, while in all such running horizontally none are present. In the veins of the limbs, of the intercostal spaces, and of those coursing from the ventral to the dorsal line, valves are abundant, while those of the trunk, neck and head are found wanting. The occasion for this mechanical reinforcement is perfectly apparent. In man and his erect kin this peculiarity of the lower animal order persists—presenting the anomaly of valves in horizontal veins, where they are not necessary, and of their absence in vertical trunks, where they would be of great benefit. These statements are technically correct, with only very slight modifications incident to evolutionary changes now taking place; facts that point in one direction to a time in the past when he, too, went on hands and feet, and in the other to a Utopian state of physical perfection, at present indicated in Malthusian ideals. A number of untoward conditions are due to the imperfect adjustments above recited, e. g., varicosities, hemor-

rhoids, oedemas, hyperemias, sluggish activity of the portal circulation, etc.

An excursion through the alimentary passage presents some interesting observations. In the first place, the mesenteric attachment of the viscera is clearly indicative of a mechanical advantage in favor of the serpent and his peculiarity of locomotion. In the horizontal position of the body the point of support of all the viscerae is from above, while in the erect it is against a vertical wall. In the one instance an equilibrium of the parts is maintained by natural influences, while in the other the tendency of the structures is to drop below the place of fixation. This latter disposition is inevitable unless counteracted by some accessory provision acting from in front and below. Next, if a rubber tube, having the same irregularity in conformation as the intestines, were placed on a level surface, as a table, there would be no great difficulty in passing through it a current of liquid, but the same suspended from a bracket on the wall would vary the conclusion of the experiment. Trace the meanderings of the tract and observe the number of mechanical hindrances. Uphill in half the small intestine and downhill in the other half; uphill in the cecum and first division of the colon, easy transit in the transverse, and downgrade to the sigmoid turn; a right angle bend at the hepatic and splenic flexures, a diverticulum with the mouth upward on the head of the cecum and a double deviation at the beginning of the rectum. In consequence of these physical anomalies, the attention of the profession of late has been largely directed to this subject. Sir W. A. Lane, of London, a pioneer in this field, has elaborated the theory of "chronic intestinal stasis" as a prime factor in the production of a large percentage of intra-abdominal pathologies. By his reasoning the mechanical relations of the alimentary tract are changed in consequence of the assumption by man of the erect posture. Because of this upright position there is a constant tendency to general and persistent enteroptosis. Nature attempts to relieve the strain by a variety of expedients variously interpreted by different students of this subject. Lane designates some of them "the crystallization of the lines

of force," or "the crystallization of resistance." These provisions are now becoming familiar as "bands, folds, veils, kinks, and membranes." For the relief of these folds, bands, veils, etc., and for the correction of the mechanical features giving rise to them, a variety of operative expedients have been devised, as ileo-colostomy, colectomy for short circuiting, the division of bands and contractions, and the taking up of slack in sagging redundancies. That splanchnoptosis, in some degree, is the most common of all intra-abdominal ailments, "that a stasis of the intestinal current allows of the absorption into the circulation of toxic products, producing degenerative tissue changes, and that such is largely dependent upon the changes from the horizontal to the vertical position," is generally conceded by every one giving the subject thoughtful study. In connection with the recognition and treatment of this class of cases radiography has been called into conspicuous notice, and a new line of physiological investigation instituted. A common error in this new work is the constant conflict with false analogies due to the comparison of classes of subjects possessing radical variations as herein indicated. Sir Lane attempts to justify his operation for releasing, cutting, and removing of bands, belts, veils, etc., and at the same time holds to the theory they are conservative provisions. While he and his followers seem to have grasped the correct etiological idea, they are drifting abaft in treatment, on account of not being able to apply the remedy to the removal of the cause.

With the birth of every new thought the commercial gentlemen hasten to the christening. An amusing spectacle is witnessed in the founding of sundry kangaroo colonies, where patients caper around on all fours. To say the least, this frolicsome gamboling is altogether entertaining and quite as logical as anything suggested.

No effort has been made to review but the salient features of this subject; matters of evident verity, of easy demonstration, and of which there can be little controversy. The conclusion of these reasonings is distinctly not in the direction of an atavistic reversion to primitive types, but in support of the the-

ory that man had his beginning in a lower form, is still carrying some of the unobliterated evidence and is with the passing of the ages attaining to higher planes of excellency.

The appendix, a former digestive organ, now a functionless diverticulum, is rapidly disappearing, if you will allow of the term "rapidly" in the sense of geological chronology. Other structures, likewise becoming unnecessary, are gradually disappearing and still others acquiring beneficial characters, e. g., the beginning reduplications of endothelial folds in the valveless veins, where valves should be.

Despite the incidental handicaps consequent upon marked changes, as herein noticed, advantageous qualities are being acquired that enormously enhances the total efficiency of the individual and insures his highest racial attainments.

What was written by Esdras near the wilow-fringed rivers of Babylon, more than twenty-three centuries ago, still holds good: "As for truth it endureth and is always strong; it liveth and conquereth for evermore."

FRACTURE OF THE CAPITELLUM.*

H. H. McCampbell, M.D.,
Knoxville.

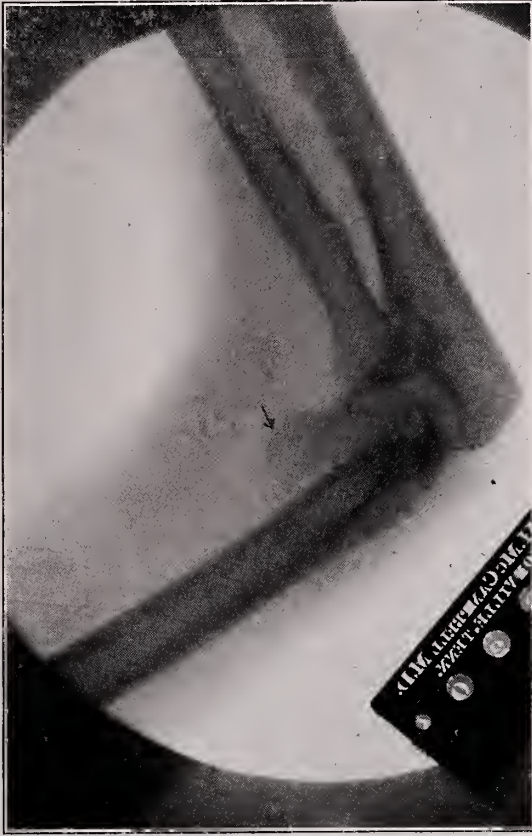
Prior to the general use of the X-ray the diagnosis of no class of fractures puzzled the surgeon more than those of the elbow joint, and in none did he feel more anxiety as to the ultimate result. In fact, it was axiomatic that limitation of function was to be expected, and the patient was advised accordingly.

With an accurate knowledge of the pathology present in a given case, the prognosis is in many cases removed from the realm of the problematic to that of the probable.

It has been my privilege during the past few years to make skiagrams of almost every known injury of the elbow joint, and as a re-

*Prepared for the Knox County Medical Society.

sult of my experience, I am of the opinion that no hard and fast rules can be laid down for the treatment of fractures of the elbow



joint, but that better results will be obtained in the majority of cases by putting them up in the position in which the fragments are best held in position, as shown by the X-ray.

While the operative treatment of fractures is taking precedence in the minds of many surgeons, still much may be said to the contrary, and I believe operative measures to be unwarranted unless it can be shown that the fragments cannot be held in apposition otherwise.

However, there is one fracture of the elbow in which the verdict of those who have had experience is unanimous that operative treatment is best. I refer to fracture of the capitellum.

Piersol's "Human Anatomy" gives the following description of capitellum:

"The capitellum, on which the concave head of the radius plays, is situated on the front of the outer part of the lower end. It

is not far from being a portion of a sphere, since it is convex and nearly equally so in all directions, but the arc from above downward is the longest. A groove runs between it and the outer ridge of the trochlea; the outer border is straight; the posterior runs obliquely backward and inward. The capitellum is placed so much to the front as to be nearly or quite invisible from behind; hence the articular surface is much more extensive on the front than on the back. The fossa, a small depression above the capitellum, receives the the edge of the head of the radius in extreme flexion."

Two types of fracture of the capitellum are described, one of which is really an avulsion



backward of the cartilage covering the articular surface; the other is either a complete or an incomplete fracture of the bony prominence itself.

The case which I wish to report occurred in a young man about nineteen years of age

and was caused by his being thrown from a motorcycle. He thinks that he struck on his elbow, but is not sure. He was taken immediately to a nearby physician's office. On examination he was found to be suffering great pain and complete loss of function in the joint.

When I saw him an hour later, the joint was much swollen and the gentlest manipulation caused very great pain. The skiagrams (see cuts) showed a complete fracture of the capitellum without other injury to the joint. The lateral view shows the displaced fragment beautifully and the antero-posterior, while not so distinct, shows it also. The patient was taken to the hospital, and an effort was made, under anesthesia, to set the fracture. Skiagrams made later showed that the fragment was not held in place, and it was decided to do an open operation, and remove the loose piece. The operation was done on April 2, 1915. Unfortunately, infection occurred and healing was consequently prolonged. At the present time, the forearm can be completely flexed, but can be extended but little beyond a right angle. Pronation and supination are perfect. Except for the limited extension, the patient has perfect use of the joint.

The rarity of this fracture is evidenced by the fact that many recent editions of text-books on fractures do not even mention it. Dr. John H. Jopson, of Philadelphia, to whom I am indebted for most of my information on the subject, in reviewing the literature¹ found only fourteen reported cases, including one of his own, of uncomplicated fracture of the capitellum.

As intimated in the beginning, a positive diagnosis of injuries to the elbow joint is usually impossible without the aid of the X-ray. You will know something is the matter, so for the patient's sake and for your own reputation's sake, consult a radiologist.

I am indebted to Drs. Harley Acuff and M. M. Copenhaver for the opportunity of reporting this case.

1 International Clinics, Vol. iv. Twenty-fourth Series.

KNOXVILLE, A MEDICAL CENTER.

By Charles Huff Davis, M.D., F. A. C. S.,
Knoxville.

To write anything of the medical history of a given people is simply to write of its origin as a community. Time was that the physician and the minister were the leaders of the community in which they lived, this fact standing out as our proud inheritance. Very many communities started out with humble beginnings in this land we call our own, and co-existent with the desires and ambitions of this new settlement, came the minister to the welfare of the soul and the minister to the welfare of the body. Usually, history is made slowly. It divides itself into epochs at long intervals, as the customs, habits, and desires of the generations change. With medicine, it seems that history is made fast and furiously. The text-book of yesterday is history. The technic of yesterday is history, and there are always some carefully labelled tools consigned to a rather rapidly growing medical museum.

Time was when the doctor was looked upon as an all-wise mystic. He is even yet supposed to know it all, and, while in this century, there still exists species of this genus that flourished in the reign of the Dodo, the general tendency of medical affairs is towards intense specialization. Hence, the internist, the gynaecologist, the pediatricist, the man on the skin, the bone surgeon, the oculist, the obstetrician, the laboratory man, the X-ray man, etc.

Cases coming to, or being sent to a fountain-head of medical activity demand superior training, and this skill and training increase, *pari passu*, with the importance of the work to be accomplished.

As a general proposition, it may not be gainsaid that as a locality increases in commercial importance it also increases in the arts and sciences. Particularly is this true of the art and science of medicine.

Assuredly, Knoxville has a fame throughout the Southland, if not a national fame, as a very important wholesale and jobbing center. Bank clearings, in big figures, attest

this importance. In addition to this importance, commercially, it never ceases to amaze even the citizen of the city to recite the natural resources of the place he calls his home. Imagine the millions invested in zinc. Only see the inexhaustible mines of coal and copper. Rich iron ore and other minerals deserve mention, too. The most beautifully marked and tinted marble in the world is here, too, with a crushing power equal to the hardest granite, and lends itself wonderfully to decorative architecture, both exterior and interior. Building stone and lime and sand abound. The forests of various woods make the lumber industry great. It

Radiating lines of railway bring in their wealth of products to Knoxville as a distributing point. The city is as a great supply-house for the territory. Natural resources and location compelled a city of nearly 100,000 inhabitants, the county seat of the third most populous county and the third county in Tennessee in wealth. Along with these important facts, comes the further fact that there is a natural tendency of outlying districts to look to their largest city for not only commercial products, but for the best development of life in a social way, in an educational way, and, be it said, in a professional way.



Lincoln Memorial Hospital

ceases to be a matter of wonder that millions of dollars are being spent in development of water power and that manufactories with great pay rolls, and great trunk lines with busy shops should locate themselves at the very door of these natural resources. Knoxville factories send their products to all parts of the world. The city is a hub, with spokes of railways radiating throughout its territory, reaching and making neighbors and customers of eastern Kentucky, southwest Virginia, western North Carolina, South Carolina, north Georgia, and northern Alabama. This, with the section of the state known as East Tennessee, is, commercially, Knoxville territory.

It seems a grim paradox to write of Knoxville as a medical center and then announce that its death rate is lower than any city in the state. It really sounds like no business. This very healthfulness makes the city a medical center. It is a pleasant place to live. The climate is never extreme either as to heat or cold. Its vegetable gardens make a market that always elicits favorable comment. The state university is located in Knoxville and a highly developed public school system, housed in modern buildings, add to the graceful appeal of the city as a delightful place to live.

For about a quarter of a century there has been a medical college in Knoxville, known

as the Tennessee Medical College, the successful career of which illustrates the importance of Knoxville as a medical center. During each year of its existence there were in attendance students from thirteen different states, on an average. When the American Medical Association appointed its committee on medical education, this school stood a first-class chance of ranking in Class A. It was not so classed on account of the lack of sufficient clinical facilities. To illustrate, the public-spirited citizens of Knoxville had an

college this source of practical teaching, thereby closing up the school. This lost to Knoxville the prestige of a high-grade school and to the merchants thereof the substantial revenue from the expenditures of over one hundred students, many of whom brought their families to the city for the advantages of public school training. Not being content with an unsatisfactory rating, the trustees of the medical college promptly withdrew from the field, and the college became absorbed by the medical department of the University of



Knoxville General Hospital

enabling act passed in the legislature giving Knox County the privilege of buying a farm for \$140,000, and making of it a present to the University of Tennessee for purposes of agricultural teaching. These same citizens could have had the privilege of granting this medical school the privilege of clinical teaching in the hospital, which facilities would have gone a long way towards meeting the requirements of the Committee on Medical Education. But they did none of these things. They almost arrogantly denied the medical

Tennessee, at Memphis.

Just along the line of medical centers in general, and Knoxville, in particular, it might be suggested that there are no medical schools within the vast territory represented by a circle drawn from Charlottesville, Va., to Richmond, to Charleston, S. C., to Atlanta, to Birmingham, to Memphis, to Nashville, to Louisville to Charlottesville. One can readily conceive the territory and the millions that reside within it.

No one regrets the higher standards re-

quired for medical education and every thinking man is in wonderful sympathy with it, but the fact remains that Knoxville is in a vast territory, where an A-1 college, with civic financial aid, would have a proper field of usefulness.

There are two hospitals in this city, the Knoxville General and the Lincoln Memorial. These institutions are a real boon to the sick, and facilitate results to the profession of the city and vicinity in a most helpful fashion. Both the institutions are crowded all the time. Both institutions conduct training schools for nurses, and the curriculum is all that could be desired. The years of service and the hours conform to the requirements of the State Board, diplomas recognized in other states. As an evidence of the high standing of the graduates of these schools, it might be of interest to note the fact that the alumnae will have the honor of entertaining the national organization of Graduate Nurses, in Knoxville this spring. This is the first time this national body has ever convened in the South.

Service as internes in the local hospitals is eagerly sought by the young graduates. There is a delightfully personal and intimate contact between the chiefs and the internes, which stimulates and makes for ideal hospital experience.

No suggestion of Knoxville as a medical center should be complete without some reference to the personnel of the profession. There is not one of the great Eastern colleges that is not represented by one or more alumni. These men take a delight in the advantages of oft-repeated returns to alma mater for further study, and take advantage of the great clinics in the great medical centers, keeping up a polish by frictional contact with real work. The members of the profession are devotees of organized medicine, and in the roster of the national academies, congresses, colleges, and associations generally of a highly specialized work, may be seen a full quota of Knoxville physicians.

The Knox County Medical Society has a membership of over one hundred. Weekly meetings are held in its own hall throughout the year. Essays are discussed with a real

zeal that can only result in a thorough understanding of the features of the disease of the technic under discussion.

Oftentimes, during the calendar year, the local profession has the honor of entertaining specially invited guests from a distance—those antlered monarchs of the herd, so to speak. Ripe experiences and highly developed talents bring their messages of real help to us.

Then, after a season of weighty subjects, when one feels the ennui of much well doing, there is a desire for relaxation. Dutch lunches, smokers, get-together parties satisfy the demand. These affairs are placed in the hands of specially appointed committees who develop a happy sense of humor and have a genuine intuition into just what would interest the "tired business man." The attendance and enthusiasm shown on these play-nights reveal the real heart of the profession, and it is a great brotherly heart upon which we lean for encouragement and support in those dark, trying times that every physician wots of.

THE KNOX COUNTY MEDICAL SOCIETY.

By C. Deaderick.
Knoxville.

The East Tennessee Medical Society was organized in 1847. The annual meetings were held in Knoxville, Jonesboro, Athens, and Chattanooga. At that time, there were no railroads in East Tennessee and the members of the Society traveled to the meetings on horseback. Some of them rode hundreds of miles over roads that were far from good. To do this it required a big stock of energy and earnestness of purpose. Drs. I. G. M. Ramsey, Frank A. Ramsey, B. B. Lewis and William Baker, were among the prominent members from Knoxville and Lenoir. Dr. Frank Ramsey published a medical journal, which was the organ of the society.

A public address was delivered at each meeting of the society, and the annual meetings were continued until interrupted by the Civil war.

In 1890, the East Tennessee Medical Society was re-organized, with a membership of one hundred and fifty, scattered throughout East Tennessee. It now holds semi-annual meetings.

The Knox County branch of this East Tennessee society was organized in 1872. The organizers were: Drs. F. A. Ramsey, A. B. Tadlock, S. M. Burnett and C. Deaderick, of whom A. B. Tadlock and the writer are living. Dr. Ramsey, being the oldest member, was nominated for the presidency, but the Doctor exercised his usual magnanimity, declining the honor, in favor of his juniors. Dr. Tadlock was elected for first president of the society.

The above mentioned name was continued until 1884, when it was changed to "The Knox County Medical Society," and the society was re-organized under the authority of the constitution of the Medical Society of the State of Tennessee; after which action it held its meetings by authority of the constitution and by-laws of the state organization.

Any reputable physician, holding proper credentials and living in Knox County, or other East Tennessee counties having no county society, is eligible to membership.

Some years since, nearly all of the records and other property of the society were destroyed by fire. Only two of the earlier record books were saved, and these were picked from the ashes. In looking over the records of the oldest book, 1875, we find a distinct difference between then and now. We find no reference whatever to bacteria, serums, serobacterins, pellagra, appendicitis, hook-worm, or automobiles, but we do find some interesting reading in comparing the old methods with the new.

At a meeting of the society, November 4, 1875, Dr. B. B. Lenoir reported the case of a negro man who had been struck on the head by a stick of wood. Ordinarily, one would reasonably expect such an episode to result in disaster to the stick, that it would be crushed into splinters without making any serious impress upon the skull, but, in this case Dr. Lenoir states that the stick remained intact, while the negro's skull sustained

a depressed fracture. Dr. Lenoir was a gentleman of strict veracity, otherwise his statement would appear incredible.

The Doctor called for a gimlet, but it proved too small; he next asked for an auger, but it did not serve his purpose. Then he called for a chisel and mallet, with which he chipped away a small area of bone. He then made a hook of strong wire, with which he raised the depressed bone. That day and time was not noted for strenuous cleanliness and antiseptics. Consequently there was probably an abundant array of unrecognized pyogenic bacteria ready to make an assault upon the defending antibodies within. There must have been a fierce battle between them, resulting in victory for the defenders, since Dr. Lenoir reports that only a small amount of pus appeared at one dressing of the wound. I suppose we may infer that the discharge contained the dead bodies of the combatants.

The Knox County Society has kept up with the progress of medicine and surgery. At the weekly meetings many excellent papers are read, but, as I suppose is the case with all medical men, we do not invariably coincide with the view of an essayist or speaker. In fact, we **often disagree**, very positively. Years ago, I have known severe criticisms of one another's ideas to bring on hot, angry discussion and result in bad feeling, but I think there is now marked improvement. The sensitive members of the past have learned that a member who sits quietly mum, and tamely submits to having untenable assertions thrust at him, might as well fold his tent and silently steal away.

I remember having offended one of these sensitive gentlemen some years ago, and he grew very angry. About ten years later about six members of the society criticised him severely. He submitted very quietly without apparent anger. The next day I asked him why the difference in his demeanor. He answered that it didn't pay to get mad; that he had learned to use more sense.

Since the day of the organization of the Knox County Society, its membership has gradually increased. It now has one hundred and eighteen members on its roll, and new members are joining almost every week.

In the meantime, I regret to say, that the scythe of "Old Father Time" has not passed us by unscathed. During the forty-four years of the society's existence, twenty-one of our members have passed on to the "Great Beyond."

FASCIA FAT VERSUS EGG MEMBRANE IN TRAUMATIC DEFECTS OF THE SKULL ET AL.

Benjamin B. Cates, M.D.,
Knoxville, Tenn.

The practice of medicine is oftentimes like a stranger attempting to reach his goal over a forked road in a strange country. No matter which road he takes, he wishes he had taken the other. Medicine is an experiment at the best, and if we are disappointed with our effort in a series of cases we can try another.

On May 20, 1915, I read a paper before the East Tennessee Medical Society at Athens, advocating the use of egg membrane in traumatic defects of the skull. Now, it will be allowed that any aseptic inert substance when introduced into the normal tissues to supply a defect is a poor substitute under the most favorable conditions.

Egg membrane is no exception to this rule, though it is apparently a perfectly innocent substance. One of the most serious objections of introducing a foreign inert substance into the tissues, is the possibility of a latent infection with its sequelae.

The best substance under all circumstances for somatic defects is autogenous grafts, as genetically related tissues are more liable to fuse and thus meet the anatomical and physiological indications.

Since, then, I have used and advocated egg-membrane in traumatic defects of the skull—I think it right and proper to state to my confreres that after using egg-membrane in three cases I have been disappointed with it in a certain sense, for several reasons. It is true, I have had fairly good results in one and possibly two cases; the third case with a comminuted fracture of the left parietal bone (involving the entire base of the skull—

as evidenced by the clinical signs of fracture of the different fossae) in which I used large grafts of egg-membrane, shows after a quiescent period of several months, mutterings of a coming storm.

Then the technical part of placing the grafts is not satisfactory, since the egg-membrane does not adapt itself as smoothly to the contour of the brain as one may wish. The egg-membrane cannot be sewed and is easily torn.

Therefore, I have abandoned egg-membrane for a more rational substance in traumatic and other defects of the skull, and that is the use of fascia fat, which can always be supplied by the patient. Since the dura and fascia fat have the same embryological source we may assume, other things being equal, they will more nearly meet the etiological indications than not.

I have used fascia fat taken from the patient's thigh with favorable results, both from a technical and operative standpoint.

Miss H., stenographer; white; age, 18. About two years ago fell and struck her head against the edge of a door. She was stunned for a few minutes and her recovery was followed by severe headache.

Her head was struck a little to the left of the middle of the sagittal suture. This point in her head ever after was painful and tender to the touch. After several months she began showing signs of Jacksonian epilepsy. These attacks increasing in force and frequency, she sought relief. Accordingly in September, 1915, I removed a large button of bone over the tender part of her skull (the skull at this point was one-half inch thick), trimmed away a corresponding amount of dura mater and inserted a flap of fascia fat taken from the thigh.

The patient made a good operative recovery and was much improved for several weeks. Unfortunately she has had two severe blows over the operative area, caused by striking her head against a door, and a table in stooping over to pick up some object. These jars were followed by headache and short attacks of unconsciousness. Under large doses of bromide of calcium and iodide of soda her attacks have about ceased and she has returned to her work.

THE JOURNAL

OF THE

TENNESSEE STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Tennessee

Office of Publication, 306 First National Bank Bldg., Nashville

MARCH, 1916

EDITORIAL**THIS IS YOUR JOURNAL.**

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It will take more money to make it better.

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KNOXVILLE NUMBER.

This Journal is Knoxville-made except for some necessary routine matter. The papers are by Knoxville men and the features of the editorial pages are also Knoxville productions. We have had much pleasure in witnessing the enthusiasm with which the members of the profession in our 1916 convention city have entered into the work of making this Journal and send it out with a feeling

of gratitude to them and with a sense of pride because of its general excellence.

FOUNDATION FOR RATIONAL THERAPEUTICS.

If one would be happy and free from care in the practice of medicine, he must not view his practice through eyes refracted by science. Science has a rude way of exposing the fact that many of our therapeutic idols have feet of clay, and it were better for those who can not stand the jolt to abide peacefully in the fields of ignorance where fevers are reduced by beating on tin pans, and pneumonia is cured by the application of clay poultices. In reviewing the apostasies of medicine one should not be discouraged or lose faith. These are sequential results of progress; the laying aside of cumbersome garments that the fight may be waged more fiercely. The truths of today may be the follies of tomorrow, but tomorrow finds us a little nearer the ideal until, some day when a master teleologist has laid bare the secrets of symptomatology, a master therapist will provide us with necessary specifics.

One of the most discouraging facts we have to face is that some patients will do fairly well under the most barbarous treatment. This statement is supported by the discussions one hears at medical societies from time to time. The subject is Typhoid Fever, and each doctor treats his patient differently, yet no one has had a death in years from this disease. Some feed, while others starve. Some give intestinal antiseptics and some give none. Some knock down the temperature and some let it alone, and out of all this confusion comes the patient smilingly through. What shall orientate us correctly concerning the true course to take in this and other conditions? How out of chaos may there come cosmos?

"The only foundation for rational therapeutics is the proper understanding of the working of the healthy body." If we were acquainted with our patients physiologically as well as we are some other ways we would all be better doctors. We would realize that many of our therapeutic efforts are physio-

logical absurdities and that our conceit is being freed only through the wonderful power of the human body to recuperate when attacked by disease. Disease is but pathological physiology and we must be able to recognize the normal before we can treat the abnormal, unless we intend to pursue always that course which leads through the dark alleys of empiricism.

E. R. Z.

DR. S. M. MILLER.

After a painful illness of several weeks and semi-invalidism of two or three years, Dr. S. M. Miller died at his residence in Knoxville, January 28, 1916.

He was born in Hawkins County, near Rogersville, March 6, 1851. He obtained his early education in the public schools of Hawkins County, and at the close of the Civil war attended college in southwestern Virginia. He graduated at the Kentucky School of Medicine, at Louisville, Ky., in 1876, and was valedictorian of his class. He later pursued post-graduate work in New York. For nearly twenty years he did general practice in Hawkins County, but in 1896 he removed to Knoxville. He was soon identified with the Medical College here and was Professor of Gynecology in the Tennessee Medical College, and its successor, the Lincoln Memorial University, until its transfer to Memphis. He was visiting surgeon at both the Lincoln Memorial Hospital and Knoxville General Hospital.

He was a member and ex-President of the Knox County Medical Society, a member and ex-President of the East Tennessee Medical Society, a member and ex-President of the Tennessee State Medical Association, a member of the Association of Surgeons of the Southern Railway, a member of the Southern Medical Association, a fellow of the American Medical Association and a fellow of the American College of Surgeons.

For nearly forty years he faithfully served the people of his community with unselfish devotion. He gave freely his services to the poor, and was a true friend to his colleagues. Few men in the profession have contributed more for the relief of human suffering, or to the aid of professional co-workers, than

he. He was a frequent contributor to the scientific programs of the medical societies of his section of the state. He gave special study to eugenics, and has written a series of papers on different phases of the subject. At a recent meeting of the State Association he read a paper on "The Disposal of the Dead," in which he advocated cremation in preference to earth burial. Consistent with this teaching, he requested of his family and friends that his body be cremated. He made preliminary arrangements for this, and named colleagues whom he wished to carry out this last wish. His remains were taken to Cincinnati, where incineration took place Sunday, January 30th.

The Knox County Medical Society held a special memorial service on their regular meeting night, February 15th. This meeting was well attended and his professional friends paid fitting tribute to his memory. It seemed to be the unanimous opinion that no physician in the city had been more loyal to the profession, more helpful to his colleagues, or rendered a truer or better service to humanity, for the last two decades, than Dr. S. M. Miller.

Recently he had read in some periodical, "A Toast to the Fellow Who'll Take My Place," and he asked his wife to show this to friends who had long labored with him in professional work.

The part which seemed especially to express his feeling is as follows:

"Will he see all the sad mistakes I've made and
note all the battles lost?
Will he ever guess of the tears they caused or
the heartaches which they cost?
Will he gaze through the failures and fruitless
toil to the underlying plan,
And catch a glimpse of the real intent, and the
heart of the vanquished man?
I dare to hope he may pause some day as he toils
as I have wrought,
And gain some strength for his weary task from
the battles which I have fought.
But I've only the task itself to leave with the
cares for him to face,
And never a cheering word may speak to the fel-
low who'll take my place."

Thus our friend and co-worker has ended his labors and passed to his long rest.

S. R. M.

TO THE FELLOW WHO'LL TAKE MY PLACE.

Here is a toast I want to drink to the fellow I'll
never know—

To the fellow who is going to take my place when
it's time for me to go.

I've wondered what kind of a chap he'll be, and
I've wished I could take his hand,

Just to whisper, "I wish you well, old man," in
a way that he'd understand.

I'd like to give him the cheering word that I've
longed to hear;

I'd like to give him the warm handclasp when
never a friend seems near.

I've learned my knowledge by sheer hard work,
and I wish I could pass it on

To the fellow who'll come to take my place some
day when I am gone.

Will he see all the sad mistakes I've made and
note all the battles lost?

Will he ever guess of the tears they caused or the
heartaches which they cost?

Will he gaze through the failures and fruitless
toil to the underlying plan,

And catch a glimpse of the real intent and the
heart of the vanquished man?

I dare to hope he may pause some day as he toils
as I have wrought,

And gain some strength for his weary task from
the battles which I have fought.

But I've only the task itself to leave with the
cares for him to face,

And never a cheering word may speak to the fel-
low who'll take my place.

Then here's to your health, old chap; I drink as
a bridegroom to his bride;

I leave an unfinished task for you, but God knows
how I tried.

I've dreamed my dreams as all men do, but never
a word came true,

And my prayer today is that all the dreams may
be realized by you.

And we'll meet some day in the Great Unknown—
out in the realms of space;

You'll know my clasp as I take your hand and
gaze in your tired face.

Then all your failures will be success in the light
of the new-found dawn—

So I'm drinking your health, old chap, who'll take
my place when I am gone.

The above lines were written by Dr. S. M. Mil-
ler, the beloved ex-President of our Association,
who died recently. Something of the soul of the
man is reflected in this expression of a most beau-
tiful sentiment.

DREAD-NOUGHTS.

By E. R. Z.

WARNING—Everything said in this issue
of the Journal must be taken from a KNOX-
VILLE point of view. Don't take us too
seriously, for we are feeling mighty fine over
the fact that the State Association meets with
us!

God bless Chattanooga—she needs it!

No, Dr. Nash was not born in Nashville.
He was born in Bluff City.

The center of the war zone has moved to
Memphis.

If you want to effectively stop any scien-
tific argument just say, "I don't believe it."
Beyond that there is nothing left to be said.

We believe the Knox County Medical So-
ciety to be one of the best in the state.
Personally, and there are many others, we
have learned to look forward to the meeting
every Tuesday night with a feeling of gen-
uine pleasure. The papers are good and the
discussions are even better, and a most de-
lightful feeling of good fellowship prevails.

All work and no pay makes Doc a dull
boy.

It takes a lot of work to get out one issue
of this Journal. We have more respect for
Brer West's ability than we have ever had
before, and by the way, our Journal is a
credit to the Association, and he deserves all
the praise. Show him you appreciate his ef-
forts by sending him a paper for some future
issue, and pray for him constantly.

The following song is being sung in certain
parts of the state:

Dowling, I am growing old,
Silver threads among the gold—
Tell me, Oscar, tell me true,
What did Carduus do for you?

Concerning the meeting next month, if West and Middle Tennessee will come clean, we will do the rest. Soft coal is burned in this town exclusively.

Candidates for the 606th Degree will meet in the Wasserman Building.

We hope every doctor who comes to Knoxville for the meeting will have a good time as well as a profitable one. If after you have been here a few hours you find out you are not having as good a time as you expected, you tell us about it—we'll put you next!

Camphor High Balls will be served at most any of the drug stores.

Don't forget that the University of Tennessee is in Knoxville. This is your university as much as ours and you should visit it, and we are sure you will be proud of the institution. Get acquainted with the scope of the work it is doing and you will go back home a booster.

Don't forget to feed your dog before you leave home. Then you won't have to hurry back.

And may these three always abide—Faith, Love and Charity.

Knoxville is going to do all in her power to make this meeting a great success. We extend to you all a cordial invitation to come and partake of our hospitality. Meet your friends here and make new ones. It does us good to mingle with our co-workers and to get better acquainted with each other. Lots of times we dislike a man because we don't know him, or have wrong ideas about him. So come and dwell with us awhile and we will do you good!

Any society desiring to edit an issue of the Journal can secure expert advice from the Editorial Committee of this issue on how to "don't do it."

Remember the time—April 4, 5, 6!

A LAST APPEAL TO COUNTY SECRETARIES.

At this writing there are still fifteen County Secretaries unreported for 1916. The annual meeting is less than thirty days off and the time between now and April 1 will be a very busy time in this office. If you have collected dues from any of your members please send in their names and their 1916 state dues at once. It won't help you any to wait and it will help us greatly if you will make your report **now**. If others pay up later their names can be reported then. We want to go to Knoxville with every record right up to the minute. Please help us to do that thing by sending in your report today.

THE SECRETARY.

THE KNOXVILLE PROGRAM.

Any member of the Tennessee State Medical Association is entitled to a place on the program of the annual meeting if he feels that he has a worth-while message to present, and if he notifies the Program Committee of his desire to be heard in time for the committee to assign him a place on the program. No member has any right to send in a subject and ask for a place on the program unless he is sincere in his implied promise to be on hand with his paper. Nor should any member who wishes to read a paper wait until the very last moment before sending in the title of his essay to the Secretary. The Program Committee is anxious to have the Knoxville program up to the high standard established in former years. There were too many papers last year for all of them to be heard. Some very excellent essays were not presented for want of time and this was a matter for regret. The committee is anxious that every paper shall be read this year and will try to arrange the program so that this can be done.

Those who desire to present papers at Knoxville should send the titles to the Secretary **at once**. Twenty minutes will be allowed for the reading of each paper, and things will be kept moving so that the scientific work of the society shall be thorough and finished.

The program will go to press on March 20th.

TWO NEW COUNTY SOCIETIES.

It is with very great pleasure that the Journal announces the organization of county medical societies in Coffee and Hawkins counties. Reports have been received from Dr. Chas. Griffith, Secretary of the Coffee County Society, and Dr. J. S. Lyons, Secretary for Hawkins County.

Both of these counties formerly had active societies, but for several years no organization has been maintained by either of them. The Journal, in behalf of the entire membership of the State Association, most heartily welcomes the members of these two new county units, and extends most sincere good wishes for their success.

We hope that good delegations will be present at the Knoxville meeting from both Coffee and Hawkins.

THE AMERICAN MEDICAL GOLFING ASSOCIATION.

In accordance with preliminary announcement made in the A. M. A. Journal previous to the last A. M. A. Convention, the American Medical Golfing Association held its first tournament in San Francisco, June 21, 1915. Arrangements were then made for the organization and that is now complete with the following directors:

President, Wendell C. Phillips, New York.

Vice-President, James Eaves, San Francisco.

Secretary-Treasurer, Will Walter, Chicago.

Plans are now being made for the second tournament to be held in Detroit at the forthcoming A. M. A. Convention in June.

The Directors have decided to list as charter members all fellows who shall have enrolled by April 1, 1916.

All fellows of the A. M. A. who play the game are eligible and may obtain the desired information from the Secretary-Treasurer, Dr. Will Walter, 122 S. Michigan Boulevard, Chicago.

Members of the British Medical Association have a similar organization for play at their annual meetings, and it is thought that

this will add materially to the social interest of the A. M. A. as it has the B. M. A. Conventions.

REDUCED RATES IF—

Once more we have tried to secure reduced rates for members who will attend the annual meeting of the Association. Last year the required number of tickets was not turned in to the Secretary. This time we will be allowed to count members who come to the meeting on passes issued to them as railroad surgeons, and if all others will buy the proper kind of tickets and turn them in to the Secretary, we ought to get the rate.

Read carefully the conditions:

All delegates or members holding standard form certificate receipts secured from and executed by agents at starting points evidencing payment of tariff rate to place of meeting, will be sold tickets for return trip under following rules, at one-half of the first-class fare in effect from place of meeting to original starting points, plus 50 cents, via routes traveled on going trip as specified on certificate receipts. (When routing is via a steamship line the steamship arbitrary will be added.)

GOING TRIP. It is necessary that such persons procure certificate-receipts from agents when going tickets are purchased. If through tickets to place of meeting cannot be procured at starting stations, persons should purchase to most convenient stations at which such through tickets can be obtained and there repurchase through to place of meeting, procuring certificate receipt from each agent from whom a ticket is purchased, and presenting all certificate receipts to Special Agent at place of meeting. No refund of fare will be made because of failure to procure certificate receipts.

RETURN TRIP (a) VALIDATION FOR RETURN. Certificate receipts will not be honored for return tickets unless signed with ink by authorized officer of our meeting and by Special Agent appointed by carriers, who will sign certificate receipts only when satisfied that two hundred (200) or more delegates or members holding properly executed certificate receipts have attended meeting. You, therefore, see how important it is to procure certificate receipts when purchasing going tickets.

TIME LIMITS. No certificate receipts procured more than three (3) days (not counting Sundays) prior to or more than (2) days after date fixed for the commencement of meeting will be honored.

Certificate receipts must be presented to ticket agent during time meeting is in session or with-

in three (3) days (not counting Sunday) after date fixed for adjournment of meeting.

NOT TRANSFERABLE. Neither certificate receipts nor tickets issued in exchange therefor are transferable, and if presented by any other person than original purchasers, they will not be honored but will be forfeited.

Tickets for return trips issued in exchange for certificate receipts will be limited to continuous passage by first train or steamer leaving place of meeting after purchase.

Certificate receipts must be presented to ticket agents a sufficient time in advance of departure of trains or steamers to permit agents to properly issue tickets and check baggage. They will not be honored by conductors or pursers.

Return tickets at reduced rates will be sold only to stations within territory described by carriers in their tariffs announcing arrangements for this meeting.

No certificate receipt evidencing payment of less than 75 cents for going ticket will be honored for reduced fare returning.

No certificate receipt issued in connection with children's half-fare ticket, mileage, clergy, charity or employe's ticket, or any other form of transportation at less than the full regular first-class fare, will be honored for reduced fare returning.

Be sure to secure certificate receipt from ticket agent when purchasing your ticket to place of meeting.

On the Tennessee Central the rate will be one and one-third fare plus 25 cents, while on all other roads the rate will be one and one-half fare plus 50 cents.

News Notes and Comment

The Knoxville doctors are going to do things "right up to the handle." You'll never forgive yourself if you miss this meeting.

Dr. T. Hilliard Wood, of Nashville, upon invitation from physicians and others and as a speaker representing the Tennessee State Medical Association and the American Medical Association, delivered a lecture in Franklin on "Conservation of Vision." A large audience heard Dr. Wood, and as a result of this lecture the school children of Frank-

lin will have the benefit of systematic tests for discovering possible visual defects.

Drs. Martin Fischer, Cincinnati; F. P. Calhoun, Atlanta, and W. R. Cubbins, Chicago, will be our guests at Knoxville and will contribute to the scientific program. They will deliver addresses upon subjects of present interest, and the Journal speaks advisedly in assuring members that they will hear productions fully up to the standards heretofore established by our visiting guests.

Preliminary Program

E. C. Ellett, M.D., Memphis, Presidential Address.

Martin Fischer, M.D., Cincinnati, "The Principles of Treatment in Nephritis."

F. P. Calhoun, M.D., Atlanta, "The Significance of Retinal Changes in Cardio-Renal-Vascular Disease."

W. R. Cubbins, M.D., Chicago, "A Preliminary Report on the Use of Foreign Bodies in the Peritoneal Cavity."

C. N. Cowden, M.D., Nashville, "Surgery of the Gall Passages."

Jno. M. Maury, M.D., Memphis, "The Cellular Reaction of the Peritoneum to Infections."

E. T. Newell, M.D., Chattanooga, "The Treatment of Inoperable Carcinoma of the Uterus by the Percy Cautery Method. Report of Cases."

E. W. Cocke, M.D., Bolivar, "Recognition of the Early Symptoms of Dementia Praecox."

M. Goltman, M.D., Memphis, "Aneurysm and Aneurysmorrhaphy: A Study of Twelve Matas, and Two Ligature Operations."

L. E. Burch, M.D., Nashville, "Menstrual Disorders."

E. Dunbar Newell, M.D., Chattanooga, "An Analysis of One Hundred Consecutive Appendectomies Done at the Newell Clinic."

H. Lockhart, M.D., Coalmont, a paper.

C. P. Fox, M.D., Greeneville, "Who Shall Operate? A Plea for More Careful Preoperative Study of Surgical Cases."

Wm. Litterer, M.D., Nashville, "A Simplified Technique in the Application of Schick's Reaction for Testing Immunity to Diphtheria."

W. F. Clary, M.D., Memphis, "Report of Two Gunshot Cases."

W. C. Dixon, M.D., Nashville, "Tuberculosis of the Kidney."

B. F. Fyke, M.D., Springfield, "Constipation."
J. H. Atlee, Chattanooga, "Some Problems in Feeding."

J. B. McElroy, M.D., Memphis, "Functional Kidney Tests."

W. M. McCabe, M.D., Nashville, "Intestinal Obstruction."

W. H. Witt, M.D., Nashville, "Some Features of History Taking."

Battle Malone, M.D., Memphis, "Unnecessary and Harmful Operations."

M. M. Cullom, M.D., Nashville, "A Case of Labyrinthine Fistula—Operation—Recovery."

C. E. Brush, M.D., Nashville, "Haemoptysis and Haematemesis."

H. M. Tigert, M.D., Nashville, "Some Surgical Considerations of Gastric and Duodenal Ulcer."

H. H. Shoulders, M.D., Nashville, "The Public Health Situation in Tennessee Portrayed by Mortality Records."

Larkin Smith, M.D., Nashville, a paper.

H. T. Brooks, M.D., Memphis, "The Occurrence of Malignancy in the Gastro-Intestinal Tract."

Willis C. Campbell, M.D., Memphis, "The Solar Treatment of Tuberculosis in Bones and Joints." Illustrated by lantern slides.

J. L. McGehee, M.D., Memphis, "Tumors of the Female Breast."

S. T. Rucker, M.D., Memphis, "Cardioneuroses."

W. T. Black, M.D., Memphis, "Retro-Displacements of the Uterus."

T. H. Woods, M.D., Bell Buckle, "The Treatment of Typhoid Fever."

J. A. Crisler, M.D., or Eugene Johnson, M.D., Memphis, "A Plea for the Early Recognition and Treatment of Hyperthyroidism."

Perry Bromberg, M.D., Nashville, "The Treatment of Syphilis."

J. W. Handley, M.D., Nashville, "Immobility in the Treatment of Injuries of the Fingers and Toes."

W. D. Haggard, M.D., Nashville, "Lantern Slides of Some Surgical Curiosities."

G. P. Zirkle, M.D., Kingston, "The Prostatic Problem."

Herbert Acuff, M.D., Knoxville, "Prevention and Treatment of Shock."

Edgar McNabb, M.D., Knoxville, "Pneumothorax."

W. S. Nash, M.D., Knoxville, "The Interlocking of the Different Branches of Medicine."

L. L. Sheddan, M.D., Knoxville, "Significance and Mismanagement of Acute Abdominal Pain."

E. R. Zemp, M.D., Knoxville, "Fallacy of the Milk Diet."

W. W. Potter, M.D., Knoxville, "Why Go to An Oculist for Refraction?"

The scientific work of the Association meeting will be entered upon immediately after the completion of brief opening exercises. The address of President Ellett will be the first number on

the program and from the completion of this address until the end of the meeting the time will be devoted to reading and discussing papers at each of the morning and afternoon sessions. Twenty minutes will be allowed for the presentation of each paper.

All meetings will be held at the Imperial Hotel. A "speechless banquet" on Wednesday evening will be the social feature.

SECTION ON OPHTHALMOLOGY, LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY.

Chairman—Giles C. Savage, Nashville.

Vice-Chairman—Newton C. Steele, Chattanooga.

Secretary—Octavus Dulaney, Dyersburg.

Monday, April 3, 10 A. M.

1. Chairman's address, "Routine in Eye Work," Giles C. Savage, Nashville.

2. "Dacryocystitis as a Predisposing Cause of Corneal Ulcers," Louis M. Scott, Jellico.

To open the discussion, Charles B. Jones, Knoxville.

3. "Trachoma," Andrew F. Richards, Sparta.

To open the discussion, Newton C. Steele, Chattanooga.

4. "Intra-Capsular Cataract Extraction," Chas. H. Davis, Knoxville.

To open the discussion, W. G. Kennon, Nashville.

Afternoon Session, 2 P. M.

5. "A Report of a Case of Cystic Tumor Arising in an Orbit in Which Transplantation of Fat Had Been Done," W. Likely Simpson, Memphis.

To open the discussion, Hilliard Wood, Nashville.

6. "Subconjunctival Injections," Emmett L. Jones, Cumberland, Md.

To open the discussion, George H. Price, Nashville.

7. "A Case of Removal of Tumor on Optic Nerve," J. McChesney Hogshead, Chattanooga.

To open the discussion, F. Phinizy Calhoun, Atlanta, Ga., and E. C. Ellett, Memphis.

8. "Some Fundus Diseases of Interest to the General Practitioner," Jos. Lee Goodwin, Chattanooga.

To open the discussion, Archibald C. Lewis, Memphis.

9. "Hyalitis; With Report of Cases and Treatment," John Thomas Herron, Jackson.

To open the discussion, Thomas P. Miller, Knoxville.

10. "Acute Middle Ear Trouble," Walter Dotson, Lebanon.

To open the discussion, G. B. Gillespie, Covington.

Evening Session, 8 P. M.

11. "The Upper Respiratory Tract From a Surgical Standpoint," Cornelius C. Howard, Memphis.

To open the discussion, Charles Huff Davis, Knoxville.

12. "Tonsillectomy—Indications and Technique," Edwin Lee Roberts, Nashville.

To open the discussion, O. Dulaney, Dyersburg.

13. "Secondary Hemorrhage Following a Tonsil and Adenoid Operation; With Report of Case," W. Scott Farmer, Cookeville.

To open the discussion, George E. Vaughn, Clarksville.

14. "Subperiosteal Abscess and Necrosis of the Antrum of Highmore; With Report of Case," Alexander B. Dancy, Jackson.

To open the discussion, Emmett L. Jones, Cumberland, Md.

O. DULANEY, Secretary.

Society Proceedings

RESOLUTIONS OF WHITE COUNTY SOCIETY.

DR. J. H. SNODGRASS.

Dr. J. H. Snodgrass was born in White County, Tennessee, in 1836, and died at Nashville on Sunday, January 30, 1916. He was a son of James Snodgrass and came of a very old and prominent family.

Dr. Snodgrass began the practice of medicine in 1855. During the war between the states he served as surgeon to the 25th Tennessee Regiment, and was mustered out at the close of the war with the rank of Colonel. At the close of the war he returned to White County and resumed his private practice which he continued without interruption until 1902, when, on account of advancing age, he retired and removed to Nashville, where the remainder of his life was spent.

Dr. Snodgrass was a charter member of the White County Medical Society. An interesting document in the form of a fee bill adopted by the White County Medical Society on July 1, 1867, and now in the possession of a member of this Society, shows Dr. Snodgrass to have been an active member of the Society at that time. He began the practice of medicine before the day of medical colleges of the South, but the University of Tennessee, in recognition of his splendid attainments, conferred upon him the degree of Doctor of Medicine in 1888.

He possessed unusual natural endowments

and was recognized throughout this portion of Middle Tennessee as a leader in his profession, while the number of his friends, both in the profession and among the people, was limited only by the number of his acquaintances. By a very large number of people the judgment of "Dr. Mack" on any medical matter was accepted as final. During the half century of his active practice he saw the profession take many wonderful strides forward and he, himself, kept step with the march of progress.

Therefore, be it resolved by the White County Medical Society, now sitting in regular session, that, in the death of Dr. Snodgrass, the profession has lost a leading light, and that the members of this Society, individually feel that they have sustained, each, a personal bereavement.

Resolved further, That we as physicians enulate and commend to our professional brethren his long life of devotion to the high ideals of the profession, and that we extend the hand of sympathy to the aged wife and the family in their great sorrow.

Resolved further, That these resolutions, with the sketch of the life of Dr. Snodgrass preceding them, be spread at large on the minutes of the Society and that copies be furnished the family and the local press.

S. E. GAINES, Chairman;
D. R. GIST,
W. L. BROCK,
R. E. LEE SMITH,
POWELL K. LEWIS,
A. A. BRADLEY,
A. F. RICHARDS, Secretary.

DICKSON COUNTY.

At the February meeting of the Dickson County Medical Society, Dr. T. M. Harper was made President and Dr. H. C. Guerin, Secretary. The Society will meet on the first Tuesday of each month, at Dickson.

BEDFORD COUNTY.

Bedford County Medical Society met in regular session February 17, 1916, and was called to order by President Moody with the following present: Drs. Taylor, Ray, Coble,

Woods, Avery, Orr, Shelton, C. W. and S. S. Moody, Freeman, Dyer, Spencer, Reagor, and Dr. Sam Hardiman, of Normandy. Minutes of previous meeting read and approved.

The essayist, Dr. G. E. Horton, being absent, the meeting was devoted to case reports.

Dr. Avery reported an interesting case of gun shot wound of the hand.

Dr. Taylor reported case of hyperthyroidism following whooping cough and lagrippe. Dr. Woods reported case of congenital syphilis. Dr. Spencer reported case of syphilis of throat. Dr. Freeman reported case of an old man with hyperthrypy of prostate and arteriosclerosis. All of these reports were interestingly discussed. Dr. Sam Hardiman, who has recently located at Normandy in Bedford County, presented his application for membership in our Society.

A letter from Dr. E. C. Ellett, President of State Association, was read, wherein he urged our Society to take up the course of Post Graduate Study recommended by Ameriman Medical Association in Bulletin, Vol. II, No. 1. This will be considered at our next meeting in March, after we get a copy of the Bulletin and see what it requires. No other business, adjourned to next meeting.

F. B. REAGOR, Secretary.

HENDERSON COUNTY.

Henderson County Medical Society met Tuesday, February 21, 1916, in the waiting room of Drs. Brandon and Parker with a good attendance present, notwithstanding bad roads and epidemic of grippe.

Minutes of the previous meeting were read and approved.

Dr. W. F. Huntsman was the essayist for the evening, and read a most excellent paper on "LaGrippe," paying particular attention to the complications. The paper was freely discussed by every member present.

Dr. M. P. Boyd and Dr. E. G. Maxwell each reported an interesting case to the Society and the cases were freely discussed.

We are looking forward to the best year's work in the history of the Society. We already have the largest membership in the history of the Society, with prospects for more

yet. We will have several members at the State Association, as several are planning to go.

Members present at the meeting Tuesday were: Drs. Boyd, Bolen, England, Maxwell, Huntsman, Brandon, Watson, Johnston, Davidson and Parker.

SAMUEL T. PARKER, Sec'y.

MAURY COUNTY.

The Maury County Medical Society met on February 7, 1916, in the reading room of the Elk's Club at 11 a. m. After reading the minutes of previous meeting in January, Dr. L. S. Trusler, State Organizer for the A. M. A., delivered a very interesting talk. The essayist, Dr. P. H. Faucett, then read an interesting "Synopsis of the Treatment of Wounds," suggesting many interesting points, which were more fully brought out in the discussion that followed.

The Program Committee then announced the subject and essayist for the March meeting, and the Society adjourned to meet the first Monday in March.

M. A. BEASLEY, Secretary.

WILLIAMSON COUNTY.

The Williamson County Medical Society met Tuesday afternoon at 2 o'clock in the office of Dr. Dan German, with Dr. H. P. Cochran presiding. There was a very good attendance, and some interesting subjects were discussed. Dr. J. O. Walker was the principal speaker, reading a paper, which was well received.

During the afternoon resolutions were passed that all school children of the county should have their eyes examined by their teachers, and requests were made that each doctor in his respective district should urge the teachers of the various schools to make these examinations.

Book Reviews

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College, Philadel-

phia. Twelfth edition, thoroughly revised. Octavo of 1336 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$5.50 net; half morocco, \$7.00 net.

This work follows the general outline and arrangement as previous editions. It has been brought up-to-date both in its text and illustrations. Especially is this true as regards diabetes mellitus, acute anterior polio-myelitis, hydrothorax, gastro-enteroptosis, and several other conditions. Recent tests that have been popularized in the recent past have been given due emphasis and space, among which may be mentioned: The phenolsulphonethalein test in kidney disease; Shick's test for antitoxin in blood in diphtheria, and Barany and Neumann's test in the diagnosis of labyrinthine disease.

The text and plates on pathology have been made to conform to the present-day teachings of recognized authorities on this branch.

The late views of various investigators, as recorded in the recent literature, have been quoted, whether these views agree with those of the author or not. This enhances the value of the book as a work of reference and study.

PRINCIPLES AND PRACTICE OF PHYSICAL DIAGNOSIS. By John C. DaCosta, Jr., M.D., Assistant Professor of Medicine in Jefferson Medical College. Third edition, thoroughly revised. W. B. Saunders Company, Philadelphia, 1916. Cloth, \$3.50 net.

When the demand for a book requires three editions in seven years, with reprinting of the first two editions between times, it means that the medical profession has found what it needs and wants. This third edition of DaCosta is fully up to the standard of all the work which has been published under that honored name. All of the newer diagnostic methods are fully discussed and measured with the same care as this author has always applied in his scientific writings. We commend this volume most heartily as a thorough, practical and comprehensive discussion of the principles and practice of physical diagnosis.

PELLAGRA. By George M. Niles, M.D., Gastroenterologist to various hospitals, Atlanta. Second edition. W. B. Saunders Company, Philadelphia, 1916. Cloth, \$3.00 net.

This book of Niles is a very faithful gleanings and stacking of statement from many fields. Lombroso, Lavinder, Goldberger, Thomson-McFadden Commission—all of those who have worked and written on pellagra are here quoted more or less copiously, and Dr. Niles adds his word of personal conviction to the mass. He has been shaken somewhat from his tenacious hold on the Zeist theory, but is not yet ready to

let go entirely. Goldberger's work seems to have Dr. Niles "almost persuaded." His book is a readable production in which can be found some more or less extensive reference to the work of every investigator of note. The warning sounded by Dr. Niles not to diagnose pellagra on insufficient evidence is timely and well worth careful consideration. It seems to this reader that there is too much treatment advised. Why stick arsenic and amins into every pellagrins when so many will get well, if taken in hand early, from the simple procedure of eating the right food, cleaning up and keeping clean?

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By Arthur R. Edwards, M.D., Professor of Principles and Practice of Medicine and Clinical Medicine, and Dean of the Faculty in the Northwestern University Medical School, Chicago, etc. Philadelphia, 1916. Lea & Febiger.

Dr. Edwards has given us a very usable book. It is reasonably accurate and up-to-date. The author has consulted a great deal of recent literature in the preparation of his text. He avoids controversial matter, sometimes too much so. For instance, under typhoid fever he advises a strict fluid diet and insists that this should be milk, unless strongly contraindicated. Again, under beri beri, he alludes to the vitamin "theory," but is silent on its bearing upon the therapy of the disease, despite the fact that this is the only treatment we have and that the results from it have been specific. Under the treatment of hookworm disease, oil of wormwood is not mentioned. Relapsing fever is said to be transmitted by bedbugs and lice only. Amebic dysentery is said to be due to ameba-dysenteriae and no means of differentiating it from endameba coli is offered. One is led to believe a sort of Widal test is applicable to it. This is, of course, meant to apply to the Shiga bacillus. One should not consult a general text for information on tropical diseases and, least of all, on malaria. Northern text-book writers do themselves, the profession and public a great injustice by attempting to impart information on this subject. A disease as prevalent as malaria, numbering as it does approximately two million cases a year, deserves correct and exhaustive treatment, at least with respect to prophylaxis and treatment.

K.

A MANUAL OF HYGIENE AND SANITATION. By Seneca Egbert, M.D., Professor of Hygiene of the Medico-Chirurgical College of Philadelphia. Sixth edition. Enlarged and revised. Lea and Febiger, Philadelphia, 1916.

This is a splendid manual, thoroughly revised and modernized, without going away from time-tried principles for new methods which have not

yet passed through the refining fires of long actual service. Nothing new of proven worth has been omitted which might reasonably be expected to find place in a book of this size on a subject as large as that with which it deals. Dr. Egbert has presented in this revision a most helpful and dependable statement of fundamental principles of hygiene and sanitation, and has exercised rare judgment in emphasizing the very features of his subject which deserve to be emphasized. The chapter on Industrial Hygiene and Occupational Diseases is new and is a strong chapter, in which Dr. Egbert plays away from the tendency exhibited by some writers to let a one-sided sentiment determine their conclusions. This manual will be found worthy a place in any library and is especially commended to those who do not care to "wade through" the more pretentious works on this subject.

OBSTETRICS. A Practical Text-Book for Students and Practitioners. By Edward Bradford Cragin, M.D., Professor of Obstetrics and Gynecology, College P. and S., Columbia University, and George H. Ryder, M.D., Instructor in Gynecology, College P. and S., Columbia. Lea and Febiger, Philadelphia, 1916.

This book is given to the medical profession by Dr. Cragin and his co-author, Dr. Ryder, in order that they may present the knowledge they have gained and the convictions they hold as the result of a most extensive service in Sloane Hospital and other institutions in which large numbers of obstetrical cases are handled each year. Dr. Cragin's most unusually large experience has given to him the right to speak as one who knows, and he has put a stamp of individuality on his writings that marks his book as one which stands out among the many. American statistics in obstetrics are better and more fully given in this work than in any other. "Twilight sleep" is not accepted by the author as a practice or method the advantages of which are capable of outweighing the disadvantages. In fact, it has little left to stand upon after Cragin and Hyder have finished with it. The arrangement of matter in this volume is, in some respects, unique, but no part of the effectiveness of the book is lost on this account. Much that is found in some other texts has been omitted, but no loss of any magnitude has been thus occasioned. Altogether, this textbook on obstetrics stands as one of the best because one of the most practical yet offered.

IT PAYS THE MANUFACTURER TO MAINTAIN ETHICAL STANDARDS.

The notice of the removal of the Dextri-Maltose manufacturing plant from Jersey City to Evansville, Ind., published in one of our advertising pages, deserves more than passing attention. It furnishes evidence of the natural growth of a manufacturing enterprise which is now vacating its old factory with 18,000 square feet of floor space for a new location in the Central West and in a new plant with 300,000 square feet of floor space—sixteen times larger than the old one.

This removal from a comparatively small to a very large housing also affords striking proof that success awaits the manufacturer who produces something the physician really wants, and markets his products in accordance with the standards set up by doctors for the sale of products they use. The first commandment for the direction of the manufacturer under these standards is: "Thou shalt not offer to both physician and public, by advertising or otherwise, anything which requires medical skill to properly use."

This commandment has been ignored by some manufacturers of infant foods, who have persistently educated the public with pseudopediatrics, thereby tending to increase infant mortality and hampering the physician in the practice of scientific, or even rational infant feeding.

But ultimate reform in the manufacture and sale of infant foods was as inevitable as the reform that has taken place in the sale of pharmaceutical products. The day of mystery and tradition in infant feeding is passing rapidly.

The recent simplification of bottle feeding, rendering it possible, without impractical complication, for the family physician to successfully adapt the diet to the individual baby, has brought about a strong conviction that the direction of infant feeding is distinctly the proper work of the physician.

This conviction has in turn created a demand for forms of carbohydrate foods which can be freshly prepared in exact proportions to meet clinical indications; and for their sale without directions for use, so that the physician can personally control the administration of the food.

The firm, which announces herewith its removal from the east to larger opportunities in the west, early recognized the requirement by the medical profession for a product used in infant feeding, made and sold exclusively for physicians, with no appeal, nor information to the public.

This firm deserves no special commendation for the course it has pursued, it being its duty to follow it. Reference to the sales of Dextri-Maltose is made simply to show that it is remunerative for manufacturers to treat the medical profession fairly.

THE JOURNAL *OF THE* **TENNESSEE STATE MEDICAL ASSOCIATION**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE

ISSUED MONTHLY, under Direction of the Trustees

OLIN WEST, M. D., Editor and Secretary

J. F. GALLAGHER, M. D., Associate Editor

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VOLUME VIII

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Change in Place of Meeting

The Imperial Hotel, at Knoxville, where the annual meetings were to have been held, was destroyed by fire on the night of March 20. Consequently the place of meeting of the general sessions will be at the ELKS HOME, while the House of Delegates will sit in the hall of the same building.

The Knoxville Committee of Arrangements has been active in preparing for the comfort and convenience of members who will attend the meeting. There will be hotel accommodations for all who attend. Headquarters will be at the Hotel Stratford.

THE ROLE OF THE SEMINAL VESICLE IN GONORRHEAL RHEUMATISM.

By C. F. Anderson, M.D.,
Nashville.

From the time of the description of these organs by Fallopius in 1562, up to comparatively recent date, but little has been known of their function, their structure or their share in the production of disease.

Of recent years we have been awakened to the fact that not only are the seminal vesicles attacked by during the course of gonorrheal infection, but also that they may, and often do, harbor other organisms.

The microscopic anatomy of the vesicle and the convolutions of its systems of ducts as studied by the newer injection methods has thrown much light upon this subject. Picker has recently reported the study of a hundred and fifty subjects injected with collargol or bismuth paste. He divides the findings into five classes.

First, simple straight tubes, 3.5 percent; second, thick twisted coils with or without small diverticula, 15 per cent; third, thin twisted tubes, with or without small diverticula, 15 per cent; fourth, straight or twisted main channels with large bulbous diverticula; fifth, short main channels; large branched irregular accessory channels, 33 per cent.

In view of this study it is quite evident that some of the ways of attacking disease of the vesicles used heretofore should be modified. I refer especially to massage by rectum, since it is evident that in those very convoluted anatomical types massage can do no good. This may account for the clinical fact that some cases clear up readily under massage and others slowly, or not at all.

The juxtaposition of the ureter and infected vesicle already shown to be capable of causing obstruction of the ureter and thereby damage to the associated kidney. In some of Belfield's radiograms the ureter is shown to lie over the central axis of the vesicle, so that the usual textbook illustrations, made from dissections of the dead subject, apparently do not represent the relation existing in the living body. The length of the various vesicles

measured from six to twenty-three c. m. The capacities varied from three to eleven and five-tenths c. c. Thus it is seen that the vesicles of all the associated glandular structures of the male urethra possess the most extensive secretory surface with the worst drainage. In the majority of the types found, spontaneous healing is anatomically and mechanically impossible. Massage will suffice to cure some but not all, consequently latent foci of infection must result.

The physiology has likewise been slowly but surely worked out. No longer do we argue as to whether the seminal vesicles are secretory organs, or merely reservoirs for the semen. Newer and more comprehensive observation has settled this question, so that today we know that these organs subserve both functions, their more important one being, without doubt, the secretory.

Normal peristalsis of the seminal duct explains certain hitherto obscure phenomena, including the phosphaturia so frequent in the subjects of sexual neuasthenia. These men usually have an infection of the seminal vesicles with hypersecretion, and active peristaltis of their contents. This secretion precipitates the lime salts when mixed with the urine. It is apparent that the constant discharge of such a secretion into the prostatic urethra and thence to the bladder can throw the lime of the urine out of solution, causing phosphaturia.

Blood and pus mixed with the urine may be derived from the vesicles. This has not been considered as a cause of haematuria or pyuria.

The question of the relation of the vesicle and its lesions to sterility is an important one upon which Belfield's work has thrown much light. Since we know the vesicle to have and subserve a very important function, we should be careful lest we destroy it by radical surgical procedure.

The recent work of Huet throws much light on the pathological physiology of the seminal vesicles. He finds, in the first place, that bacteria may be present in the vesicle of the normal healthy animal. This is not surprising since it is true of other parts of the genitourinary tract. He found that in animals dying of acute septicemia, the specific organisms

were in the secretion from the vesicle. He definitely showed that in the presence of infected vesicles this infection could be transmitted from the male to the female in the act of copulation.

It is remarkably strange, but true, that with two structures so intimately associated as are the prostate and seminal vesicles, that the former should have been so thoroughly studied and the latter so definitely neglected. The profession owes a debt of gratitude to the few men who have been pioneers in this line of work, notably Fuller, Lloyd, Belfield, Thomas and Barney, of this country. Belfield and Fuller probably first recognized the role of the seminal vesicles in chronic infections of the genito-urinary tract and in certain types of arthritis. Belfield suggested a cure by means of irrigation through the vas deferens, which he has used and is still using, with good and oftentimes marvelous results. It remained for Fuller to wade boldly into the perineum and attack the vesicle itself for the purpose of drainage.

The incidents of infection of the vesicles and the probability of their acting as a focal point of infection should be apparent to everyone in the light of recent anatomical and physiological studies.

It is estimated that about ninety percent of gonorrheal patients have posterior urethritis, and that 90 per cent of these are complicated by prostatitis. By virtue of the relatively larger lumina of the ejaculatory ducts, as compared with the prostatic ducts, the infection in the posterior urethra can and does reach the seminal vesicles more readily than the prostate. Indeed the ejaculatory duct may be catheterized in some instances. Belfield has proven that the urine may pass into these ducts on its way out. This he calls "retrograde urination." Now, if we only remember the ease and almost certainty with which infection enters, and the poor drainage, or none, in some of the anatomical types, then nothing short of nature's own marvels will explain why these cases get well.

For practical proof of the vesicle acting as a focal point of infection let us take Fuller's statistics, quoting from his article of October, 1913, New York Medical Record.

"Prognosis as regards the cure of absorptive

rheumatism through seminal vesiculotomy is decidedly good. I reported my first 126 cases—of these 35 represented cases of rheumatism. Since then I have performed the operation 125 times. Of these 87 represented rheumatism. With most of these rheumatism, acute or chronic, was of a very severe grade and it was for the rheumatism that seminal vesiculotomy was performed. A minority of these cases had other clinical symptoms, due to seminal vesiculitis co-existing with rheumatism as a reason for operation. In this last series a much larger proportion represented rheumatic conditions than pertained to the first series. This largely because rheumatism is a clinical symptom of seminal vesiculitis, which usually by incapacitating an individual brings him to the hospital. In my experience at the city hospital, when those suffering from rheumatism see the rapid cures resulting with little post-operative discomfort in those who have been subjected to seminal vesiculotomy, there is such a scramble for operation that no time has to be wasted in persuasion. In my last series the results with rheumatic cases have been uniformly good. Since the preceding report I have performed seminal vesiculotomy ninety-five times, making my present total 346. In this series 69 times for rheumatism. In connection with these last cases I had one death—my first fatality. In this instance the subject was an alcoholic with granular kidney—death occurring two weeks after the operation, due to renal disease. In the last sixty-nine cases between twenty and twenty-five represented extremely chronic or most advanced conditions of rheumatism. In a number of these sufficient time has not elapsed since operation for the end results to be attained. The acute cases—aside from the one who died, and that patient stated a week after his operation that all his rheumatic symptoms had disappeared—were all discharged from the hospital in a very satisfactory condition. All were told to report at the clinic in case any disturbing symptoms occurred. Very few were seen afterwards in the clinic. Of the chronic cases of this last series there is one wherein true bony ankylosis of both hip joints had occurred, in which I am doubtful if the operation has done any good."

Just as a pure gonorrheal cystitis is a con-

dition that probably never exists, so are most, if not all infections of the seminal vesicles mixed. This is borne out by the bacteriological findings in the inflammatory exudate obtained after massage. Among the bacteria harbored in chronic vesiculitis that have been repeatedly demonstrated, may be named the gonococcus, various strains of streptococci, pneumococci, staphylococci, colon bacilli, and tubercle bacilli. It is highly probable that in many cases diagnosed, "gonorrheal rheumatism," the gonococcus has ceased to play a role and that it is a mixed infection. In Fuller's cases he did not discover the gonococcus in the chronic cases, but uniformly the streptococcus. In the acute the gonorrheal fixation test was usually positive, and often so in the chronic. In one case the test was positive over five years after the occurrence of the infections.

I could quote from Belfield's work of irrigating the vesicles through the vas, and show almost as uniformly good results—although his work has been on other conditions resulting from seminal vesicle infection, more than for rheumatism.

I believe that every male patient in our hospital wards, and private practice, exhibiting certain rheumatic and nervous manifestations should be submitted to rectal examination and proper investigation of their seminal vesicles.

The next question, naturally arising, "How are we to know in any given case whether the arthritis or other evidence of toxemia is due to involvement of the seminal vesicle? In the absence of other demonstrable foci, and in the presence of undoubted seminal vesiculitis, especially with evidence of latent gonorrhea, the answer is not far to seek. A large, hard sclerotic vesicle can be felt by the rectum. In other cases the organs are not to be palpated. It may be because they are small, but more often, perhaps, because of the cake of plastic exudate in which they lie. This question has been and is now being attempted to be answered by the X-ray. The work of Barney and Thomas, Pancost, Belfield, and others has already thrown much light on this question. It consists of injecting the seminal vesicles through the vas from a small wound in the scrotum with collargol or some other shadow casting solution, and then making skiagraphs

which show whether or not the vesicles are distended, and possibly the thickened inflammatory condition. This injection through the vas cannot be done in a small percentage of cases, on account of the occlusion of the vas by the inflammation. This is the method of treatment that is recommended by Belfield for many of these cases: In some cases where this injection has been used for diagnostic purposes by other men they have reported immediate cessation of the symptoms, most of which were followed by relapse.

The treatment of seminal vesiculitis comprises a number of methods. Intelligent and efficient massage carried out over a long period of time is unquestionably the best and safest procedure, and will probably effect a cure in many cases. The accessory value of bacterins should not be forgotten. Personally I have not seen any good come from the use of bacterins, either stock or autogenous. These patients should be viewed from the pathological standpoints. If the ejaculatory duct is strictured or obstructed massage can do no possible good. Belfield has noted this condition in his study of 25 cadavers on both sides in one case, and unilaterally in two. If the vas is strictured vasotomy or vasopuncture with irrigation after Belfield's plan cannot be done. Aschoff found the deferentia strictured bilaterally in six and unilaterally in 17 cases in an examination of a thousand subjects. Seminal vesiculotomy as done by Fuller has a definite indication in a certain percentage of cases. I believe vasotomy with irrigation should be done before the more radical and formidable operation is resorted to.

Vesiculectomy, the most radical procedure, should be the last resort and then probably only in the aged.

ANOCI-ASSOCIATION.*

By C. N. Cowden, M.D.,
Nashville.

When Dr. Crile, of Cleveland, read a paper before the Clinical Congress of Surgeons at New York in November 1912, he marked the beginning of a new epoch in modern surgery. Several years prior to this, he had begun the

study of shock; and after all his investigations into the nature of it, he set forth the idea that it was due to or the result of the excessive conversion of potential into kinetic energy, in response to adequate stimuli. In other words the rapid change or conversion of stored up energy in the brain cells, into activity or motion, causes a definite structural change in the cells. According to this conception or "The kinetic theory of shock," the essential lesions of shock are in the brain cells themselves, the suprarenals and liver. This rapid change of energy is produced by a great many causes, as he was able to conclusively demonstrate; such as fear, worry, physical injury, infection, hemorrhage, excessive muscular action, starvation, insomnia or any stimulation called forth in excess will result in the condition commonly known as shock.

Then the sight of the operating room, the spoken word implying danger, the excitement of the anaesthetic, the unnecessary instrumental injury of the tissues in the course of the operation, and the traction of the stitches after the operation, all are adequate stimuli to produce certain degrees of shock. The nerves, whether of the special senses or of common sensation, are wires that conduct stimuli or sensation to the brain cells, and cause these brain cells to discharge some of their stored up energy. The question of shock has been the *bête noir* of the surgeons throughout all the epoch through which we have advanced and occupies first place today in our efforts at prophylaxis of this frightful condition.

Upon this kinetic theory of shock, a new principle of operative surgery has been founded, the paramount object of which is to reduce the toxic action of the general anaesthetic and the traumatic factor of the operative manipulations to a minimum.

Inhalation anaesthesia puts to sleep only a portion of the brain. If all the brain was anaesthetized, the patient would be dead. It has been proven by Crile, that ether anaesthesia offers no protection to the brain cells against stimuli the effect of trauma. In other words, the nerves still carry the impulse to the brain, where it has the same injurious effect under ether as under curare. After a sufficient dose of curare, we have complete

paralysis of the voluntary muscles, but no anaesthesia. Although during an operation we have absolute stillness of the patient under curare, and have the complete loss of muscular control, he not being able to even utter a sign of protest, yet every nerve of sensation is keenly alive to the slightest degree of pain. What would be the condition of the patient at the close of such an experience? Imagine a few things that he would say to us at the close of a long, tedious operation.

For this same reason a patient who might enter the operating room in the very best condition, might emerge broken and shattered, and with the facial expressions of one tortured beyond measure, from a rough severe operation under inhalation anaesthesia. There would be complete absence of pain, but the facial expressions would denote in some degree the effect on the nerve centers. The vast army of awake brain cells respond actively to this traumatic stimulus, and cause a release of a large amount of energy in the brain. This stored energy of the brain cells is therefore consumed and if carried far enough, exhausted, with its attendant structural changes, thereby producing all degrees of this symptom complex known as shock. The prevention of this consumption has been the one great problem of operative surgery, and to prevent this loss of stored up energy of the cells, a new principle of operative surgery had to be developed, the aim of which would be to prevent or exclude from the brain the stimuli of the special senses and those of common sensation. This is the principle advocated by Crile that is now being tested by the surgical world, that of "Anoci-Association," meaning simply the exclusion of all noxious or harmful impulses, associations, or stimuli from the brain.

In order to do this, the question of the selection of an anaesthetic continues to be of first importance to the surgeon of today, who endeavors to give to those seeking his skill the best of everything connected with the art of surgery. We all realize that the question of the best anaesthetic in all cases is far from answered. It is only by the comparison of series of cases under one kind of anaesthetic, or a combination of anaesthetics, and only then when many thousand have been given, that

one can draw any conclusions. Many thousands of patients may be anaesthetized by one or another of these methods before we are able to find out its real dangers or advantages.

The post-operative effect on the patient together with his condition when the anaesthetics were begun should be taken into consideration. We might have a very high death rate on the table in cases whose condition was exceedingly grave when the anaesthetic was begun, while on the other hand, a more dangerous anaesthetic agent might show a decidedly lower mortality if given in cases whose resistance was about normal. It would be very unfair to condemn the anaesthetic, and hold it wholly responsible for the death, unless all conditions are taken into consideration. On the other hand, when a death occurs while the patient is on the operating table, whether the operation is under way or not, unless very conclusive evidence to the contrary can be produced, the anaesthetic should come in for its share of responsibility. Some deaths have occurred in this new field, but is it fair to condemn the whole method?

There is not a single anaesthetic known that will exclude all noxious or harmful stimuli from the brain. Local anaesthesia, by blocking nerve conduction, protects the brain against destructive traumatic strain but does not protect the brain from destructive psychic influence. Inhalation anaesthesia excludes the psychic but not the traumatic. Anaesthesia introduced hypodermically is excluded on the principle that it can not be controlled. Each anaesthetic covers only a part of the field; each has its advocates, but there is no single agent that alone can produce anoci-association, which is the goal of operative surgery. We therefore can not advocate ether alone, nitrous oxide alone; nor advocate local anaesthesia alone, nor morphine and scopolamin alone, nor spinal anaesthesia alone; but through selection and combination of the various anaesthetics, we aim to exclude on the most favorable terms all stimuli from the brain. Can this be done? Most assuredly yes, if you carry out in minute detail every step of the technique.

The technique briefly is as follows:

To mitigate the preoperable dread and to facilitate the induction of anaesthesia, a so-

lacing dose of morphin and scopolamin (usually morphin 1-6 grain, scopolamin 1-150 grain) is given an hour before the operation to all patients excepting the aged, the very young, and those whose feeble condition contraindicates the use of the narcotics. The use of morphin serves the double purpose of diminishing the preoperative psychic strain and of actual preventing, to some extent, the damage to the organs of the kinetic system by the trauma of the operation. Laboratory experiments have shown that in morphinized animals subjected to trauma, the change in the cells of the brain, the suprarenals, and the liver are less than in traumatized animals without this protection.

The patient is anaesthetized with nitrous oxide in his own room; fictitious anaesthesia having been daily given for several days previous to the operation, the patient is anaesthetized free from psychic strain, being under the impression that he is receiving an inhalation treatment. When under anaesthesia the patient is taken to the operating room. The division of tissue is preceded by a complete blocking, so that no activity impulse can reach the brain. Before closing, quinine and urea hydrochloride is infiltrated into every part of the raw field with a hypodermic needle. The patient is kept unconscious, under anaesthesia until returned to his room, put to bed, and his room restored to its previous condition. In the course of the cycle from his room to operation and return, the brain has received no activating stimuli, so there can be and there is no change in the pulse rate.

To illustrate more fully the method, we will take a case of an abdominal section that is to be done where the vital forces of the patient need to be considered to conduct the patient safely through the operation.

To facilitate the preoperative stage, the patient should be under the care of the surgeon for several days in a well appointed hospital. If the patient is very much depressed over the coming ordeal, and it is natural for all normal individuals to have some fear, he should be reassured by the surgeon and be made to realize that he will have very little to overcome, and that his fear and dread is very much overestimated or exaggerated.

He should be placed in a hospital, thoroughly isolated, under the care of a specially adapted nurse, for the preoperative treatment; one that can gain the confidence and keep him reassured that everything will be all right. The patient's mind should be thoroughly imbued with the importance of this preoperative treatment; a regular daily routine should be gone through with, explaining in detail just what every thing is to do. The site of the wound should have special attention, by bathing and scrubbing with some kind of antiseptic solution, and finished with a dressing just like the one to be done at the close of the operation.

The arrangement of the room should be the same every day. The patient is daily given a hypodermic of sterile water and impressed with the way he will feel under its influence, that he will not feel it much the first day, but from day to day the effect will be conditional or will be more powerful until he will feel drowsy and inclined to sleep, and after a certain length of time, after receiving the hypo, he should be given daily a fake inhalation, with some pleasant pungent essence like orange or lavender, with the same kind of mask and apparatus for giving gas, all the time explaining every sensation that he may expect to have, the same as taking of gas and he should be urgently induced to try to go to sleep under the inhalation. Along with the other details of preparation, this routine should be impressively carried out, and unless the nurse enters into the scheme and is specially adapted for the work, we will sometimes fail.

The program is adhered to until the day of operation arrives. Everything in detail is done just as before, except the blank hypo becomes morphin grain 1-4, and scopolamin grains 1-150, all the time telling the patient about the soothing effect had the day before; he feels no alarm at the effect of the hypo, because he is expecting to feel just that way. Instead of the fake inhalation the mask is connected with a gas tank and so insidiously is it given, that he has yielded to its soothing influence and is anaesthetized before he realizes that something else has been added to the daily routine. The patient is then carried to the operating room. Everything so

far has been a pleasant experience and no nocuous or harmful stimuli has been carried to the brain.

The same care in producing local anaesthesia in the region of the wound should be observed, as the operation is going to be done with only the aid of local anaesthesia, all structures carefully injected and the nerves blocked, followed by infiltrating the tissues with quinin and urea to prolong the local anaesthesia for twenty four to thirty six hours; after which very little pain, if any at all, exists in the raw surfaces, these being protected by the lymph. The wound is closed, dressings applied, the patient is returned to his room before being allowed to awake. He awakes amid the same surroundings, same room, same nurse, same dressing, everything just as on the previous days, with nothing to suggest anything different from the daily routine. What is the result? No matter how extensive the operation, no matter how weak the patient, no matter what part is involved, if anoci-technique is perfectly carried out, the pulse rate at the end of the operation is the same as at the beginning; the post-operative rise of temperature, the acceleration of the pulse, the pain, the nausea, are minimized or wholly prevented.

I close with the exact words of Dr. Crile. "To achieve results, means a thorough understanding of the principles on which the technique is founded. It necessitates the intelligent and special training of assistants, interns, anaesthetists, hospital officials and nurses. It presupposes a mind free from dogma and tradition. It means that no detail is too petty for the careful attention of the surgeon himself. Above all, it means that from the patient's first appearance in the surgeon's consulting room throughout the entire cycle of hospital entrance, operation, convalescence and exit from the hospital, there must be no sharp points of contact either psychic or physical.

"He who operates upon the canine principle of savage attack, with the biting and tearing of tissues, with one eye on the clock, and who judges the beauty of any procedure by the fewness of the minutes that it takes to complete, will fail utterly, for he has no conception of the principle involved.

We must believe in the light hand and gentle touch, and use the utmost tenderness in dealing lovingly with every tissue that we touch. Or if performed perfunctorily, as a dull ritual, the technique of anoci-association will fail. It can accomplish its purpose only when each detail, however minute, is considered from the viewpoint of each individual patient."

This is not a "pipe dream" as was at first thought, but a scientific fact based upon knowledge obtained from experimental data backed up by the microscope and lantern slides. The current literature of the past few years has been full of articles on the subject; the largest majority favorable to the new theory, and some few critical or skeptical. But certain it is, the time has come when it is not enough to say that our patients all do well after the operation, no matter if they do have some degree of shock, post operative pain and discomfort in the way of gas pains, with slow reaction, and delayed convalescence.

We will not be able to eliminate all the difficulties when we first begin to use the new method; but as we become more expert in every little detail of the technique, we will become more and more enthusiastic in its employment. It is a method that will not be dismissed with the statement "There is nothing in it;" but it is one that every up to date surgeon will have to use.

GYNECOLOGIC SURGERY.*

By E. H. Baird, M.D.,
Dyersburg, Tenn.

The frequent occurrence of pelvic troubles following obstetrical cases is a subject that should be of interest to the general practitioner as well as the gynecologist. The great number of women who are incapacitated from their work and have pelvic distress and pain dating back to their confinements urges one to consider this subject, as one of great interest to the obstetrician and gynecologist alike, and while it is true that parturition is a physiological process, how often it is that

there are conditions met with in modern methods of living that make of this physiologic process one that affects the after life and health and well being of our women. It is not my purpose to take up the question of obstetrics, but more the manner and means of correcting the condition of this great array of incapacitated women. It might not be amiss to say, in passing, that if more care and attention and teaching in our medical colleges were given to obstetrics and less to the brilliant achievements in correcting these troubles following, that we would be getting more at the foundation of the matter. Closer association between the specialist and generalist, between the obstetrician and the gynecologist is important.

In our grandparents' age there were more invalid women who died from obstetric infection than at the present time. More invalids due to unrepaired tears and other mechanical difficulties than in our present age, but there is still a great improvement to be made along this line.

Obstetrics has improved in all ways, but the minor infections and injuries at child-birth still furnish the gynecologist with a big part of his business, and while many times no traceable injury can be discovered, other than a weakening of the pelvic diaphragm, the neurasthenia and general depressive weakness dates back to the prolonged and protracted labor, and we hear the statement that the patient got out of bed on the fourth, sixth, eighth, and always on the tenth day, regardless of the amount of involution at that time.

One of the benefits claimed in our great obstetric clinics where the various modifications of the "Twilight Sleep" are used is that the patient has gotten out of the bed at an early date and that no harmful effect resulted. But if a womb heavy and soggy and enlarged from a recent confinement will not, by the laws of nature, drag on the pelvic supports and weaken them in this manner, then I am mistaken, and the subjective symptom ("I got out of bed early and felt alright for a while, then commenced to suffer"), which appears in the history in the majority of these cases, should be taken out of the gynecologist's history report as immaterial.

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These women are generally benefited by a well conducted subsequent confinement, commencing at about the tenth day following delivery and by the use of pessaries, wool tampons saturated with glycerine and large amount of hot saline solution in the form of douches daily, keeping the patient on the sides part of the time, and strict confinement to the bed, will in some cases so assist in the involution of the uterus and its supports that they secure great relief from their previous symptoms and a subsequent operation for a prolapse may be avoided. This is the only time that local treatment will have any permanent effect on these cases.

Another great number of cases which gynecologists are called upon to treat result from pelvic infections, and while many are traceable to the erring husband, a great number are infections, seemingly trivial at the time, which gain entrance to the genital tract during parturition, or to a pre-existing subacute infection which takes advantage of the inviting field and favorable circumstances to advance and infect some part of the tract not previously affected. These infections may localize as an endometritis or may enter the walls of the uterus causing metritis and chronic subinvolution or may extend to and involve the tubes and ovaries.

These infections oft-times gain entrance through trivial tears in the mucous membrane and only manifest themselves at the time by mild symptoms, but their recognition as such and their early treatment tend to minimize the subsequent damage to the parts. And if the obstetrician is familiar with the end results, in many cases he can obviate the future ruined tube and ovary and consequent resort to the gynecologist.

Tears of the cervix when they are small and where there is not a preexisting infection or where the infection is not introduced at the time, generally heal without involving enough of the nerve filaments in the scar to cause a reflex irritation. Extensive tears always leave enough cicatricial tissue to cause future trouble in the way of eversion and granulation, and when our statistics show that about one woman in eight who reach the age of thirty-five dies of cancer, and when carcinoma of the cervix is a constant attendant

among the gynecologic cases, it behoves us to look after the condition of the cervix in the multipara.

Tears of the perinaeum always need repair. They remain open and heal in this shape if not sutured. Even after suture we do not always get proper results and the recognition of this and consequent thorough examination and additional repair at future date should be undertaken.

The old idea that tears are always the fault of the attending physician has happily passed away and their recognition and repair now universally takes place. Although some have never had a tear in their obstetrical practice, it seems that a great number of their women show up for pelvic work. The muscles of the perinaeum even if not torn badly lose their tone and supporting strength from repeated pregnancies.

Miscarriages, caused by the use of the neighborhood catheter and its consequent infections, followed in nearly all cases by some degree of subinvolution and metritis, are a great source of revenue to the gynecologist. Some form of misplacement invariably follows this class and a train of symptoms that makes of the patient a constant invalid results, and while not affecting greatly their general appearance, it is a great source of discomfort to themselves and near relatives.

In addition to the relaxation of the perineal body from injuries during birth of the child and the effect this has in causing a prolapsed uterus, we must take into consideration the support of the uterus, received from the so-called pelvic diaphragm. Underneath the peritoneum and encircling and joining to the uterus at the supracervical junction we have that pelvic fascia named the diaphragm of the pelvis, described by some authors on the sides as the base of the broad ligaments and in front supporting and binding the bladder to the os pubis. In replacing and holding the uterus in a correct position this fascia needs to be taken into consideration. In operations for retro-displacements and prolapsus, conditions present govern the operative procedures, a V-shaped excision out of the broad ligament when lax, a shortening of the uterosacrals, and one of the many operations devised for the shortening of the round liga-

ments may be used. Of the latter some modifications of the Gilliam or Baldy-Webster operations are the ones generally used. In a great many cases of long standing metritis, and where the subject is near the end of the child bearing period, the uterus will be found in such condition that it is better to do an hysterectomy than to subject the patient to future operative procedures if the results from the correcting of the position, and consequent better drainage did not secure results sought for in the ease. The body of the uterus may be so septic that the lymphatic system will still continue to absorb the toxins in sufficient amount to cause the vague transient pains here and there through the system, denoting an infected condition in some part of the body. In some of these cases the headaches complained of by these patients will not be relieved by the correct position of the uterus, but requires a more radical supravaginal amputation. It is a hard matter to remove a chronic metritis of many years' standing without at least a partial amputation of the corpus. It has recently been my duty in a number of cases to decide at the time of the operation the advisability of hysterectomy supracervical for these long standing cases of metritis and in the majority of the cases I have decided for it. And my results in those cases certainly have justified the procedures.

I think the time will come when women will visit the gynecologist as they now do the dentist, and I think it is no radical step for all women when they are near the end of the childbearing period to visit the gynecologist, have their torn services and perinaei repaired, have their retroverted and prolapsed uteri replaced, have their cystic ovaries removed, and get themselves into condition to at least have comfort in their pelvic region during their declining years and in many cases avoid a condition that would lead to an early grave.

Summary:—(1). The burden here as in a majority of other surgical conditions falls upon the shoulders of the general practitioner. It should be his duty to have corrected the many and varied pelvic lesions found among his patrons, before the pathology has assumed proportions that requires more extensive and more radical operations

than in the beginning. (2) In multiparas, the pelvic diaphragm should not be overlooked when correcting these cases. (3) More careful and early consideration of the condition of the cervix will obviate many of the more serious operations required at a later date. (4) In misplacements and their corrections the operative procedures must necessarily be decided upon at the time of operation, but from among the many different methods or variations in shortening the round ligaments the Baldy-Webster or some modification of the Gilliam will suffice in the majority of cases.

SOME EXPERIENCES OF THE COUNTRY DOCTOR.*

By J. T. Graham, M.D.,
R. F. D., Mulberry, Tenn.

Mr. President and Gentlemen of the Lincoln County Medical Association: Sometime ago at one of our meetings I was appointed to furnish a paper and the subject was state¹ and agreed on as above.

I gladly undertake to write something about and in behalf of the country doctor. It is a familiar subject, and he a character I am intimately acquainted with and one all of us have met.

For versatility he is a peculiar combination. The city doctor simulates him in many respects, yet in some things is widely differing, unless the latter was originally a country doctor.

I find it difficult to give a specific pedigree of the average country doctor; nevertheless he may be safely considered to possess sufficient "crosses" in his make-up to enable him to go most all the gaits at a fair rate of speed and come under the wire on time. Yes, he seems practically a cross between a preacher, a lawyer, farmer, politician, and general counsellor. And occasionally, as a freakish round-up, he becomes an Esquire, Justice of Peace, a member of the county court, and sometimes a solon in the legislative assembly—a monstrosity. One thing I am quite sure of is, whatever crosses he may lack in his pedi-

*Read before the Lincoln County Medical Society.

gree in general, natural or acquired, will be gratuitously and abundantly furnished when he engages actively in the practice of medicine.

He begins his earthly career by being born, usually in a remote village or on a farm. He spends his first years practicing the osculatory act of milking and sleeping, with occasional interruptions of colic, which attacks are met with catnip-tea, onion juice, asafoedita, and tobacco smoke, administered by grandma or Aunt Mary Jane. Later, he spends six days learning to plow the contrary mule, and Sunday breaking the bull calves to ride and swimming in the creek; and Sunday night he alternately reposes and jumps out of bed to rub the knots out of the "crampy" muscles of his legs.

In proper time and season he has the experience of the country district school. In the meantime he receives his first practical lesson in operative surgery from his mother, who clamps his foot between his knees, and after an imperative command to "Hush and hold still," she operates on his heel with dad's old razor and a darning needle for "stone-bruise." He survives all this and many other things too tedious to mention; and attends a session in a town school, where he obtains a smattering knowledge of Latin, and also learns how to wear a collar and necktie in proper style, but—never, no gentlemen never, to part his hair in the middle. If a genuine country doctor ever parted his hair in the middle, or sported a fancy striped walking cane or wore an exorbitant watch fob, he assured he has long since repented and reformed, and regrets in after life that he had ever fallen a victim to such folly. Yes, gentlemen, the country doctor "draws the line" on parting his hair in the middle—except that "parting to meet no more."

As he reaches the age of youthful manhood, he becomes infected with an inspiration, that breaks out with an aspiration, to have a handle grafted onto his name, viz., M.D., which in his visions and dreams seem to mean, "Many Dolors," but to the juvenile class of his patients means "Most Dreadful," and in experience, "Many Disappointments" to himself. While under this mental hallucination of anticipated benefits to mankind by his services and honors

and riches for himself just ahead in his experience, he lifts anchor, spreads sails and lets his little barque out in the breeze of his imagination onto the broad ocean of medical science. He passes the peaceful harbor of his preceptor's office and receives the cooling affect of text-books. He has the stormy and anxious experience of a course in a medical college, together with the depressing and stuffy effect of the "green room," and at length comes out with a parchmentary rolled-up authority to dose the people of his commonwealth, if they are willing.

With a dignified mien, confident air and a Solomon-like expression on his face, he settles down at some small village, usually composed of a store, postoffice, church, school house, and blacksmith shop. He makes a few flourishes to let the people know that he has been to a medical college and has a diploma. Now these flourishes may be the very embodiment of grace, dignity and consistency, or awkward, clownish and spiced with youthful conceit; but no difference which, he at once becomes the subject of comment, both favorable and adverse. He becomes the subject of many jokes, sometimes practical and ridiculous, all of which he usually bears with apparent good humor, Christian fortitude and patience for charity's and policy's sake.

Just here he is often the bored recipient of bushels of unsolicited advice and suggestions, which he is told may help him, as he is young and "just a starting." Some of this is good, but most of it foolish and useless, as the people giving it are ignorant of the science of anatomy and physiology, pathology of diseases or the therapeutic action and aim of medicines. He is praised and recommended today, and criticized and ridiculed by old "Double Face," which may be a man or a woman, and lives in almost every vicinity, who declares by the horn spoons and St. Jacob staff he is for "Dock" and will be as long as he has breath in his body; but, alas, tomorrow sends for a new or strange doctor.

The young country doctor is usually called first by the poor. God bless the poor! They are ever with us. They have long ago been divided into three general classes; viz., the Lord's poor, the devil's poor, and the poor devils. Oh, what a time he has with all of

them, especially the last named. After a while he gets into "full swing" of his work and just what is expected of him may be answered in one short combination of words—*everything* possible and much impossible.

First, he must answer all calls made by people, and usually in a hurry, whether there is much the matter or not. Often when he is least needed the strongest demand to "come in a hurry," "Just as quick as you can get there," "Don't spare your horse"—and often no hope of compensation.

The most inconvenient hours seem to be the special choice of some people to call a doctor. Most trying to a doctor physically and mentally and at sacrifice of social festivities and church privileges. He is expected to render all these services with a sweet temper.

Again and again he must listen with patience, when very busy, to an old chronic tell the story and complete history of his physical ailments and, as extra trimming to the preamble, relate financial and domestic troubles, and expects the doctor furnish specific advice for all of them and medicine to boot. He must aid the unfortunate and with words of comfort sympathize with the bereaved; become the secret and confidential depository of the story and history of many a skeleton in family closets; and prevaricate some times to cover the fruits of transgression and follies of some, that their reputations may not be clouded before the world.

If the country doctor is religiously inclined, he is expected to take part in church meetings and, if necessary, to officiate at funerals; if he is not religious, he is expected to do most of the big "cussing" for the neighborhood—and be criticized for either or both.

He must not take much stock in politics or religious creeds, but is expected and called on to contribute liberally of his substance to both, and all objects of charity and every enterprise said to be for the development of his town or country. If he is fortunately able to purchase a new suit of clothes, has his hair trimmed and combed and puts a collar and necktie on and shines his shoes, he is called proud and getting "stuck up." If his clothing becomes faded and worn and his appearance untidy, he is called a slouch, could do better if he would. If by energy, perseverance,

economy and sacrifice of social pleasures, the adoption of business methods, working with body and mind day and night, through heat and cold, for a score and a half of years; he succeeds in accumulating moderate competency, it is said by many that he "made it off of the people." On the other hand, should he fail to apply systems of business in his collections and in the afternoon of life become a physical and financial bankrupt, it is said, "Oh, yes, 'Dock' was a good fellow and did lots of hard work, but was a poor business man. He ought to have managed better and collected his bills."

The country doctor is a good forager and in this matter similar to the old plantation darkey—if there is anything good to eat in the country, they both get their share, by day or by night, as may suit convenience. Such things as vegetables, fruits and poultry and other things in season he has found useful to satisfy the gastronomical cravings of a family of growing children.

But now we will notice him in practical daily life and work, traveling hundreds of miles annually over rough roads, up rugged hills and valleys. He goes into the comfortable farm house home, into the tenant cabin, and within one hour's time serves the affluent and the indigent, the intelligent and the illiterate and ignorant. Today he treats typhoid fever, menorrhagia and pulls the children's teeth; to-night he applies forceps and subsequently battles with puerperal convulsions or post partum hemorrhage—sometimes both—or may attend the baby with spasms. Tomorrow, operates for appendicitis or trephines for fractured skull. In the meantime has to contend with a hysterical woman, and in this case he needs the grace of patience and the prayers of the saints as much as he needs grit and gumption in emergency calls, which he sometimes gets when miles from home, and without necessary means and appliances to properly treat such.

If it should be a lacerated wound, with some shoe thread and a darning needle he makes repairs; or if it should be a fracture of bones, he cleanses and adjusts the parts, rips a board off the smoke house roof or a paling off the yard fence, and with a jack knife improvises splints, converts a shirt into bandages, and binds it up with harvesting binder twine; instructs the pa-

tient to stay in bed, keep the parts quiet and get well. And as to microbes and germs, just let them go to Halifax, or a warmer country—he don't believe in half the fuss made by city doctors about the bugs, nohow.

Sometimes he is called to assist an ignorant midwife with a case of confinement, to find puerperal convulsions or post-partum hemorrhage, or possibly both; and, as Professor Meenes said in lecturing, finds the patient "lingering in the hazy twilight of another existence." He converts (the best means at hand) a long-handled gourd into a fountain syringe and stays the crimson current of life and saves the patient to her family.

Now these are not imaginary pen pictures; but are real experiences that confront and occur in the life of the country doctor, and sometimes when miles away from a drug store or a brother physician to consult, assist him, bear the burden and share the responsibility. He must tread the way alone. But if his heart is right and he has faith in God and himself, (and most of them have) with true grit, a cool head and careful, determined action he does the best he can to keep nature to a proper equilibrium. If successful, he is thankful and appreciated; if the cause terminates unfavorably, he has the consciousness of having done his duty, and the courage left to try again.

The patrons of a country doctor, as a rule, are more faithful and loyal to him than most people in the thickly populated towns and cities; not only for a month or a year, but for life. If he gets a firm hold on a man or family, and does his duty faithfully, patiently and kindly, they are more than patrons—they are friends, and to lose such by death or otherwise means not only to lose patronage, but friends.

Occasionally he finds a case that with all his investigation, examination, learning and wisdom the diagnosis is not as clear as a sunbeam to him, and the exact line of treatment is clouded with doubts in his mind, but the emergency must be met. So with no apparent perplexity in his facial expression, if he can hide it, he reaches into his saddle bags and fishes out a bottle of highly colored, nameless (?) liquid, and with impressive instruction, orders that five (5) drops be given every three (3) hours in some water until he returns.

When a city doctor finds himself in a similar dilemma he gets out some pink colored tablets and gives about the same directions.

Now, if forced to confess what was in the mysterious red drops or tablets the country doctor would say, "Pla-ce-bo," and the city doctor would pronounce it "Plass-e-bo," but no difference which; they both in haste get to their books and read up the case.

You all know how it is, or was a long time ago, in our first years of practice. Of course, the members of this society have long since passed the experimental stage. Now there may be some in this audience or assembly not of our profession. There are some lawyers that talk much about the law, but not much about justice. Possibly preachers who talk some of things we all know a little, and talk much of the future that none of us know anything. Now to such my confession about doctors may be a revelation. To all such, let me say, go your way, tell about our meetings and tell and tell, but never tell about the bottle of colored water or the pink starch tablets because I have made these statements in confidence; and as Josiah Allen's wife said when she told about Josiah kicking Miss Thomas' pet dog into the road to eternal rest, while praying: "This must be kep."

There is one criticism offered against the country doctor. Now and then one of them practices one point of Methodist doctrine, viz., falls from grace by moving to a town or city; but he should be forgiven, in the interest of city people—they need good doctors as well as country people.

Gentlemen, I hope you will not in any way construe this or any other statement made in this paper as egotistic or boasting, for some of the greatest men in the medical profession were originally country doctors.

William Jenner, who originated vaccination, one of the greatest boons to mankind, and especially to womankind, was, we are informed, a country doctor.

Dr. Koch, who made such wonderful discoveries scientifically, was a country doctor.

Nathan S. Davis, who has been styled the father of the American Medical Association, was practically a country doctor.

Dr. Crawford W. Long, who discovered and practically demonstrated the value of anesthe-

sia in surgery, Jefferson County, Georgia, was practically a country doctor, and many others that have been distinguished. The number that have not become distinguished before the world, yet have been as faithful, useful and heroic is legion. They are sentinels ready for beacon and call at every cross road village.

P. S.—The oft-repeated query is, What is to become of the country doctor?

It seems that he is to be called "Dennis," is marked and doomed to annihilation.

The patent medicine vendor, with his fine wagon delivers and dispenses to the doctors and patrons, miscellaneous medicaments—headache, rheumatic and other remedies, all sure cure, guaranteed to hit and relieve every spot of illness the human family and beast are subject to.

The village merchant does the same stunts, and sometimes steals the doctor's thunder to help him sell the nostrums on his shelves, and dispenses calomel tablets at ten cents per dozen.

As the doctor rides along the road along comes the city doctor in his "Devil wagon" and honks, honks and honks the horse into "fits," the buggy is wrecked and he is left in the rubbish under a shower of mud or cloud of dust and odor of gasoline, and is bid adieu by a few more honks from down the road from the wreckless speed machine.

But this belongs to another chapter, the answer also.

THE RESPONSIBILITY OF PREVENTABLE DEATHS—TO WHOSE ACCOUNT SHALL BE CHARGED?

By James A. LaRue, M.D.,
Pulaski.

If a placard was nailed up in Pulaski stating "Mad dog loose!" how long would it take every man, woman and child to be safely indoors, so as to escape not only the bite of the mad dog, but the horrible infection of rabies?

If, on the other hand, the physicians of a

community meet and invite the people of the community to meet with them to discuss preventive measures so that happily we may escape the infection of other germs as deadly and many times as destructive to the human race as rabies, will they accept? The invitation is ignored and no interest is taken until an epidemic is abroad in the land, the direct result of infection from the very germs we wished to discuss. Blame is laid at the door of the health officer and with him all the local physicians, or the community charges up the epidemic to the providence of the Lord, and the deaths to the devil and the doctors.

We point with pride to the scientific achievements of the regular medical profession. Those problems, the solution of which, adds so much to health, happiness and life has been worked out with great labor and sacrifice—even to giving up life itself. Is it necessary to mention the true cause of yellow fever—that was formerly the great scourge of our own beloved Southland—its management and control? Of malaria, its cause and control? The Panama Canal Zone was formerly the most unhealthy spot on the face of the earth, but by the help of our great American sanitarians its mortality is said to be less than any place in the United States. The humblest doctor residing in the most remote and inaccessible place in Tennessee can and must do a part—this call to the flag will take no excuse. But doctors can do little without co-operation. We need the confidence and intelligent co-operation of all the people in the community. We need all the people, farmers, merchants, bankers, mechanics, laborers, as well as our ministers and doctors to take part in this the greatest money-making scheme—the conservation of the health of the nation.

We have met to discuss problems that are more important than all the monies stored in your strong banks—of more value than your golden wheat fields, that this year give to the nation one billion bushels of wheat—of more value than all your mines of iron and coal, of silver and gold. We have met to discuss the way and means in the prevention of disease, and find out, if we may, to whose account must be charged preventable deaths.

If the law made it an indictable offense to

*Read before the Giles County Medical Society at a public meeting.

ignore sanitary rules and measures; if it was a misdemeanor to fail to clean up and keep clean; and if it was a felony to distribute disease-breeding germs, how few would escape!

The first indictment is against the regular medical profession and its individual members.

How about the cases of cancer in your practice that in your wisdom passed your notice? Why did you fail to examine that wart or mole and remove it? And now you say the man has cancer. Why did you tell that good woman that consulted you—"Oh, it is of no consequence—it is probably the 'change of life?'" It may be a change celestial, for the woman has cancer and the surgeon says it is inoperable now. Whose account?

Seventy-five thousand people die in the United States each year from cancer. Bloodgood says if the diagnosis were made at the beginning and the proper treatment given the mortality would be reduced 100 per cent! We trust the eminent doctor is right, but many shadows dim our hope, as the statistics show a steady increase in the number of cases, and unless we become more accurate in making earlier diagnoses—and the people awake to its cunning invasion—it will not be long until the deaths from cancer will out number the fearful former record of the great white plague.

What about that case of tuberculosis of the lungs? You made the diagnosis a year ago. What care did you exercise to protect the other members of the family? The good and faithful wife is now stricken, and in less than one year she, too, must go to that far away land.

Whose account?

Tuberculosis is a preventable disease—and as an evidence, the death rate has been reduced in the last thirty-three years over 50 per cent, or, to be exact, in the year 1880 the death rate was 326 in 100,000. In the year 1913 the death rate was 147.6 in 100,000. And yet there were 143,000 deaths from tuberculosis in the United States in the year 1913.

What about that case of scarlet fever of which you were not sure, but called it "scarlet rash," and you did not think it worth while to call in the health officer? Well, she

had the "scarlet rash," and several school children contracted scarlet fever from her. "What shall the harvest be," and to whose account?

That case of typhoid fever—why didn't you enforce strictly all known sanitary rules and measures? Why didn't you vaccinate the other members of the family against typhoid? And now there are a number of cases where there should have been but one. Whose account? If all proper hygienic and sanitary measures were enforced, and if the same care were taken to vaccinate against typhoid fever as is done in the United States army, in less than twenty years there would not be a case of typhoid fever in Giles county. But here stands a charge against our neighbor. He does not believe in germs. He cannot see any special harm in flies. The Lord made the flies. He is too busy making money to take time to clean up. His horse stables are incubators for the horse fly, and general headquarters for the distribution of all germs. He is not connected with sewer, and says it is worthless anyway, because his neighbor has a toilet for white folks and an open privy for the negroes. What is the use of sanitary privies? His father and mother did not have any of these luxuries, and each of them lived to be over eighty years of age. Herein lies the cause of the case of typhoid fever—a young man—and the sick baby has dysentery. Whose account?

Another neighbor does not believe in "scarlet rash" being "catchen"—won't say a word to the doctor, and sends the "rash" to school. Result—a number of cases of scarlet fever. Whose account?

Another neighbor says, "I am going to send my children to school if they do 'catch' the measles, whooping cough, or other contagious diseases of childhood. It will be better for them. Have over with these things while they are young." Little angels are made in this way. Whose account?

We might multiply many times instances to show lack of knowledge or neglect of known duties—all of which is the result of passive acquiescence in following long beaten paths.

It is certain that we are, within limits, our brother's keepers, and that one clan is not able to successfully control against the ene-

mies of health, and death follows because of the neglect to obey nature's laws.

How, then shall we interest all the community and make them realize their **individual** responsibility? How shall we bind the cords of the brotherhood of man, that all may feel the smallest pulsation of the tiniest heart in pain? By education. Let those of us best qualified to speak publish to all the people the knowledge of all the laws of health. In simple words teach them—and they in turn teach others. Ministers, merchants, teachers, farmers, mechanics, laborers—all must do their part according to the light given them.

The bread we cast upon the waters this day will return and with it the blessing sought.

Our bodies freed from the germs of disease and decay, make it a fit dwelling place for that immortal, unseen, intangible essence—God's handiwork—the soul.

OPINION OF COURT OF CIVIL APPEALS IN THE "INDIAN DOCTOR" CASE.

STATE OF TENNESSEE EX. FRANK M.
THOMPSON; ATTORNEY GENERAL.

VS.

J. S. ANDERSON.

ROANE COUNTY EQUITY.

OPINION

In February 1915 the Honorable Frank Thompson, Attorney General for this Commonwealth filed a bill in his official capacity as representative of the public against one J. S. Anderson, averring in substance that the said Anderson was receiving and treating patients and selling remedies and otherwise practicing medicine in Roane County, Tennessee without having a license therefor and without having submitted to the examination prescribed by our legislative Acts as a condition precedent to the practice of medicine; and also that Anderson had erected at Kinston a sanitarium in which patients were received and cared for, and that this institution was constructed and conducted in such a way as to become a nuisance. It was also alleged that Anderson was repeatedly, persistently and wilfully violating the law and defying the medical laws and authorities of Tennessee and was so conducting himself as to become a nuisance, to the endangering of the health,

peace and good order of the state. It was also averred that the people of the locality in which he carried on his practice were much in sympathy with him, so much so that the constituted authorities were powerless to deal with him through the criminal courts and other remedies, and that an appeal to a court of equity for redress of the grievances of the people was absolutely necessary. An injunction restraining Anderson from practicing medicine and running a sanitarium during the pendency of the litigation was prayed for, and it was sought as the sole and final relief to have this injunction made perpetual.

Chancellor Kyle granted the temporary injunction as prayed for in the bill. Defendant immediately answered as well as demurred and entered his motion for a dissolution of the injunction. This motion was disposed of by the Chancellor on the 3rd day of March. It was his conclusion that the injunction should remain in force, and he accordingly so decreed. This injunction remained in force until the 16th or 17th of June succeeding, at which time it was dissolved in the manner to be hereinafter noted.

Somewhere about the 15th or 16th of June, the dates in the transcript now before us being somewhat confusing, the cause came on for final hearing in the Chancery Court at Kingston. The Honorable John W. Staples acted as special chancellor, the regular chancellor being absent. A jury had been demanded and some issues of fact are recited to have been submitted to them. During the pendency of the trial defendant renewed his motion to dissolve the injunction, this motion at last taking the form of a challenge of the jurisdiction of the court to entertain that part of the bill seeking to restrain him from practicing medicine and demanding dismissal of that portion of the bill and dissolution of the injunction for lack of power in the court to grant such process. The learned special chancellor was of the opinion that this position was sound. He accordingly decreed that so much of the bill as sought to restrain Anderson from practicing medicine was beyond the jurisdiction of the court and dismissed the same and dissolved the injunction. On this or a succeeding day one or two removed complainant requested the court for permission to amend his bill so as to strike therefrom all reference to the maintenance of the sanitarium by Anderson. This was granted with the consequence that every feature of the bill other than that seeking an injunction against the defendant's practice of medicine was eliminated; and it being apparent on the record that this part of the bill had been dismissed by the court, there was nothing left for litigation. The Attorney General thereupon prayed

and perfected his appeal to this Court. While the exception and prayer was to the action of the court in dismissing the bill and dissolving the injunction restraining the defendant from practicing medicine, we must treat the prayer as for a broad appeal.

The chancellor in dissolving the injunction consequent upon his dismissal of the bill for an injunction against the practice of medicine recited that his order to this effect was an interlocutory one, entered before the final termination of the case. The chancellor also appended or consented to have appended to the granting of the appeal a direction that a temporary injunction which had been dissolved by him a day or two prior to the final decree should stand dissolved pending the appeal.

At an early day of the present term complainant appeared before this court and prayed that writ of attachment issue for defendant and that he be brought before this tribunal to show cause why he should not be dealt with for contempt in continuing the practicing of his profession in violation of the injunction which was issued and in force upon the day that that particular portion of the bill was dismissed and the injunction dissolved. Writs of attachment accordingly issued, when defendant was arraigned at the bar of this court he demurred to the contempt proceeding and declined to file a sworn answer or to controvert the issues of the petition. So that we are left to deal with questions of law only. We must assume that defendant has continued to follow his profession in receiving and treating patients and to this court.

The right of this court to deal in the premises is vigorously assailed by able counsel for defendant, and because of this and the somewhat novel aspect of the questions we have given the subject careful consideration. The brevity of our treatment may not be commensurate with our deliberations of the questions. But we think a brief statement of our position upon all the points raised will suffice for disposition of this preliminary question. The main proposition is pending before us upon appeal.

1. It is first urged that the dissolution of the injunction in this case was by interlocutory order; and the general rule denying the right to appeal from such order is relied upon. It is also insisted that there was no appeal from this order and that the appeal which was finally taken was not effectual to bring up the dissolving order for review. We are constrained to take the opposite position. We are of opinion in the first place that the recitals of the action of the court in connection with the dissolution of the injunction

clearly made the order of the court a final decree and not a mere interlocutory order dissolving the injunction. If the injunction had been simply dissolved, there would be much ground for defendant contention. But as the court held that it had no jurisdiction upon this feature, the dissolution of the injunction was, of course, a dismissal of the bill. Now when all other parts of the bill were dismissed by complainant the effect was to make the order dissolving the injunction the final decree. No other conclusion can be drawn if we look to substance. It must be recalled that the several entries were made at the same term.

II. It is contended that the injunction was dissolved by the chancellor pending the appeal and that this justified the defendant in pursuing his profession unhindered; and it is urged that an appeal to this court did not reinstate the injunction. We are of the opinion that the contrary universal rule is that an appeal in an equity cause puts an end to the jurisdiction of the lower court and transfers the litigation to the appellate tribunal. Citations supporting so plain a proposition are not needed. It is equally true that an appeal annuls every part of the decree and revitalizes all the processes issued and make writs and orders the processes and commands of the appellate court. It is manifestly true that if the injunctive process is the sole relief and if a temporary injunction has been granted and is in force at final hearing, an appeal reinstates the injunction and makes it the injunction of the appellate court. Of course, there may be cases, where the lower court commands the doing of something or restrains conduct during an appeal. But this does not destroy the efficacy of the rule revitalizing or continuing an injunction: *Foley vs. Leath*, 3 Shannon's Cases 358; *Gibson's Suits*, 2 ed. Sec. 849; 3 C. J. p. 1280; 6 R. C. L. 508; *Barnes vs. Typographical Union*, 14 L. R. A. (N. S.) 1150; *Hubert vs. Cement Company*, 38 L. R. A. (N. S.) 439; *Merrimack Bank vs. Clay Center*, 219 U. S. 527, 55 L. ed. 320 and note.

See also our own cases to the effect that an appeal vacates every order made by the chancellor and brings up the whole case for review; and further that all steps desired after the appeal must be taken in the appellate court: *Norton vs. Barnes*, 2 Lea 610, and others.

III. But it is said that this is an appellate court only and that it has no jurisdiction to examine witnesses, and it is thence argued that no judgment of contempt can be pronounced. This position is also unsound. The contrary was established if it ever doubted by the recent case of *State vs. Hebert*, 127 Tenn., 220, opinion by Chief Justice Neil. See also the foregoing citation as

lending the strongest support to the proposition that courts of appellate jurisdiction do have the power. We believe that a sufficient answer is to be found in our statutes providing for contempt punishments. The power to punish cannot be denied if the injunction be treated as the process of this court; and this we have so held. This power is inherent in appellate courts as well as in lower courts. There certainly is no force in the objection that we cannot examine witnesses when a defendant confesses the facts constituting the contempt.

IV. It is most strenuously urged that the chancery court had no jurisdiction in the first instance to issue the injunction against Anderson, and it is thence argued and of course with soundness, if the premise be granted, that there can be no punishment for violating such process. But we deny the premise. We have reach the conclusion after painstaking investigation of the authorities that the Attorney General as the representative of the *parens patrie* was within his power and duty in asking for an injunction restraining the defendant from illegally practicing medicine, and that Chancellor Kyle had the power and jurisdiction to grant the writ. That the criminal courts were open to the Attorney General is no sufficient answer; nor is it adequate response that no property or pecuniary interest in complainant is shown. It is true that the general rule is that injunctions will not issue to restrain certain acts prohibited by the criminal laws, and that this process will not be awarded unless property rights are involved. But this is not without exception; and we are persuaded that the present bill can be justified under the exceptions. It was decided by our own Supreme Court in the late case of *Alexander vs Elkins*, 132 Tenn. 663 that the time had arrived for departure from the rigid rules respecting this process, and that advancing times and conditions had made necessary an extension of the power to grant this writ. An injunction restraining repeated criminal prosecutions was sustained upon the distinct ground that the defenses afforded were not sufficient guarantees. It is manifest that repeated indictments of Anderson and the imposition of the small statutory fine provided would afford no protection, and would still necessitate repeated suits. As a matter of fact the culprit might continue his profession although confined in jail. Hence the powerlessness of the criminal courts notwithstanding the incalculable harm which might be done the great body of the people by the open and persistent and contemptuous violation of the statute and regulations which the authorities in this State have solemnly adjudged to be necessary safeguards

for the health and well being of every one. If there be no precedent, it is time one is being made. The power to make precedents has not been exhausted, and when there exists a condition that needs an adequate remedy, then the chancery court, the protean tribunal which is supposed to respond to the social needs of the people for the purpose of affording remedies and protecting rights, should not hesitate to consider itself vested with the power to restrain and prohibit. And the Attorney General, standing as he does as the defender of the people and the protector of the morals, safety and health, should be considered as vested with the right and onerated with the duty of appealing to the equity side of the governmental powers to put down an unmixed evil and a menace which cannot be dealt with except by a restraining hand. We so hold that it may be done and believe that this exercise of power is warranted by principles as clearly established as almost any other by which rights are guaranteed. With respect to the duty of the Attorney General see 4 Cyc. 1029; *State vs. Standard Oil Company*, 120 Tenn. 86; *Attorney General vs. Shrewsbury*, 1 Eng. Ruling Cases 567. We wish particularly to call attention to some of the propositions advanced by the great English Court of Equity. It is there said that the Attorney General might apply to the court to restrain the execution of any act of a public nature where it manifestly affected the public generally, and that there should issue an injunction to restrain a series of illegal acts which tended to injure the people. We also wish to call attention to the cases and accompanying notes of *State vs. Crow*, 15 L. R. A. (N. S.) 747; *State vs. Earlick*, 23 L. R. A. (N. S.) 691; wherein it was admitted that if conduct affected the public health an injunction might issue; *State vs. C. B. & Q. Railway*, 88 Neb. 660, 34 L. R. A. (N. S.) 250; *State vs. Lindsay*, 85 Kan. 79, 35 L. R. A. (N. S.) 810; *Re Debs* 153 U. S. 564, 39 L. Ed 1092. The opinion in the *Re Debs* case was delivered by Mr. Justice Brewer; and if we had no other authorities his reasoning would be convincing and sufficient for us. It is true that he concluded by stating that some property right must be involved, but this was an uncalled for and an unfortunate statement. It was admitted that the United States Government had no pecuniary interest and was acting simply as the sovereign charged with the duty of protecting the health, welfare and good order of the people; and the injunction was sustained solely upon the ground that it was essential to the exertion of governmental functions and powers that the repeated acts complained of, although criminal, be restrained.

All the foregoing and numerous other adjudications could be referred to as answering the propo-

sition that an injunction is not to be denied simply because the defendant might be dealt with criminally. The trouble is to be found in the failure to discriminate between cases where the criminal courts are themselves restrained and those where defendant who is pursuing a criminal course is enjoined. There is no basis whatever to assert in the latter case that the criminal courts are embarrassed or that their functions are being usurped.

V. It is not worth while to discuss the contention that the defendant is not practicing medicine. He virtually confesses it. And indeed no other conclusion can be arrived at. Nor need it be said that the state cannot regulate the practice of medicine and prescribe qualifications and make the practice a privilege: *O'Neal vs. State*, 115 Tenn. 427. The lives of the people are too sacred to be entrusted to quacks and empirics. The art and science of medicine can be acquired only after long training, study and practice; and owing to the proneness of afflicted human kind to resort to the shrine of the faker and even to any one who holds himself out as an alleviator of pain, it behooves the authorities to exercise the very greatest care in qualifying persons to follow this human need.

We refer to this as a privilege. It is more. It is a franchise as it were; the following of a profession, which amounts in a manner to an office, as all physicians have duties to perform which directly affect the public health, welfare and morals. Hence an additional reason why the Attorney General should be vested with the power to file a bill and enjoin any one manifestly not qualified from exercising this function. Such proceedings should be assimilated to an information in the nature of a quo warranto, to the end that the right of the defendant to exercise this exalted privilege be inquired into.

Without more we adjudged the defendant guilty of contempt of this court in violating the injunction restraining him from practicing medicine, and adjudge that he undergo confinement in the county jail of Roane County for a period of ten days and that he pay a fine of fifty dollars and the cost of this attachment proceeding, and that he be detained after the expiration of his ten days' confinement until he shall have paid or secured said fine and costs. A mitimus is directed to be issued by the clerk of this court to the Sheriff of Roane County commanding him to take and commit the defendant in accordance with this order.

HIGGINS, J.

A NATION-WIDE BABY WEEK.

The number of communities that are seriously attacking the problem of infant mortality should be greatly increased in 1916 by the na-

tion-wide observance of March 4 to 11 as Baby Week. Successful baby weeks have been carried on in several cities since the first one was held at Chicago in April, 1914. But never until now has there been a nation-wide movement for a baby week in cities, towns and villages, in every state in the Union. In every case the local baby week campaigns have resulted in more active and enlightened community work for infant welfare and in a wider understanding by mothers and fathers of the fundamental principles of infant care. The state health officers of forty-one states have expressed their intention of co-operating in Baby Week. Many of the state health departments already have admirable pamphlets and traveling exhibits for use in their own states and circulars of information concerning the practical details of a baby week campaign may be secured free from the Children's Bureau of the United States Department of Labor at Washington.—A. M. A.

HENDERSON COUNTY.

The Henderson County Medical Society held its regular monthly meeting Tuesday, March 14, in the waiting rooms of Drs. Brandon and Parker, with the President, Dr. R. H. Milum, in the chair.

Minutes were read and approved.

Dr. D. W. Bradfield reported a very interesting case of diabetes, and Drs. J. M. Arnold, C. H. Johnston, C. E. Bolen, R. H. Davidson, and F. J. Bray also reported interesting cases. This was one of the best and most practical meetings we have ever had, as the time was spent altogether in reporting cases and discussion of the cases.

Drs. Watson, Bolen, Bray, and Maxwell were appointed by the President to either bring papers or report a case at the April meeting.

Let every doctor in the county bear in mind the meeting of the State Medical Society in Knoxville on the 4th of April, and let all who can possibly do so attend, as it will be one of the best in the history of the organization.

Doctors present were: Drs. Bradfield, Milum, Bray, Bolen, Watson, Arnold, Johnston, Huntsman, and Parker.

SAMUEL T. PARKER, Sec'y.

Official Program, Knoxville Meeting

OPENING EXERCISES

Call to order by L. L. Sheddán, M.D., Chairman of Committee on Arrangements.

Prayer, Rev. Geo. R. Stuart, Knoxville.

Address of Welcome by Mayor J. E. McMillan, Knoxville.

Address of Welcome on behalf of the Knox County Medical Society, W. S. Nash, M.D., Knoxville.

Announcements by Chairman of Committee on Arrangements.

Association placed in charge of the President, E. C. Ellett, M.D., Memphis.

SCIENTIFIC PROGRAM

1. "Obiter Dicta," Presidential Address, E. C. Ellett, M.D., President Tennessee State Medical Association.
2. "Treatment of Typhoid Fever," T. H. Woods, M.D., Bell Buckle.
To open discussion: R. E. L. Smith, M.D., Doyle.
3. "Surgery of the Gall Passages," C. N. Cowden, M.D., Nashville.
To open discussion: O. S. McCown, M.D., Memphis.
4. "Pneumothorax," Edgar McNabb, M.D., Knoxville.
To open discussion: W. Scott Farmer, M.D., Cookeville.
5. "An Analysis of One Hundred Consecutive Appendectomies Done at the Newell Clinic," E. Dunbar Newell, M.D., Chattanooga.
To open discussion: J. T. Delaney, M.D., Bristol.
6. "Functional Kidney Tests," J. B. McElroy, M.D., Memphis.
To open discussion: Perry Bromberg, M.D., Nashville.
7. "A Preliminary Report on the Use of Foreign Bodies in the Peritoneal Cavity," W. R. Cubbins, M.D., Chicago.
8. "Haematemeses and Haemoptysis," C. E. Brush, M.D., Nashville.
To open discussion: W. K. Sheddán, Columbia.
9. "Why Go to An Oculist for Refraction?" W. W. Potter, M.D., Knoxville.
To open discussion: G. E. Vaughn, M.D., Clarksville.
10. "Some Surgical Considerations of Gastric and Duodenal Ulcer," H. M. Tigert, M.D., Nashville.
To open discussion: J. H. Barnett, M.D., Chattanooga.
11. "Cardioneuroses," S. T. Rucker, M.D., Memphis.
To open discussion: Larkin Smith, M.D., Nashville.
12. "Who Should Operate? A Plea for More Careful Preoperative Study of Surgical Cases," C. P. Fox, M.D., Greeneville.
To open discussion: (?)
13. "Some Features of History Taking," W. H. Witt, M.D., Nashville.
To open discussion: K. S. Howlett, M.D., Franklin.
14. "Birth Control?" Harry Lockhart, M.D., Coalmont.
To open discussion: O. J. Porter, M.D., Columbia.
15. "Lantern Slides of Surgical Curiosities," W. D. Haggard, M.D., Nashville.
To open discussion: F. D. Smythe, M.D., Memphis.
16. "The Significance and Mismanagement of Acute Abdominal Pain," L. L. Sheddán, M.D., Knoxville.
To open discussion: Robert Mann, M.D., Memphis.

17. "The Prostatic Problem," G. P. Zirkle, M.D., Kingston.
To open discussion: G. R. Livermore, Memphis.
18. "The Significance of Retinal Changes in Cardio-Renal-Vascular Disease," F. P. Calhoun, M.D., Atlanta.
19. "The Treatment of Syphilis," Perry Bromberg, M.D., Nashville.
To open discussion: S. S. Marchbanks, M.D., Chattanooga.
20. "A Plea for the Early Recognition and Treatment of Hyperthyroidism," J. A. Crisler, M.D., and Eugene J. Johnson, M.D., Memphis.
To open discussion: R. A. Barr, M.D., Nashville.
21. "The Principles of Treatment in Nephritis," Martin H. Fischer, M.D., Cincinnati.
22. "The Fallacy of the Milk Diet," E. R. Zemp, M.D., Knoxville.
To open discussion: O. H. Wilson, Nashville.
23. "Aneurysm and Aneurysmorrhaphy; a Study of Twelve Matas and Two Ligature Operations," M. Goltman, M.D., Memphis.
To open discussion: W. D. Haggard, M.D., Nashville.
24. "Tuberculosis of the Kidney," W. C. Dixon, M.D., Nashville.
To open discussion: G. W. Penn, M.D., Humboldt.
25. "The Occurrence of Malignancy in the Gastrointestinal Tract," Herbert T. Brooks, M.D., Memphis.
To open discussion: J. F. Gallagher, M.D., Nashville.
26. "The Solar Treatment of Tuberculosis in Bones and Joints," Willis C. Campbell, M.D., Memphis.
To open discussion: W. A. Bryan, M.D., Nashville.
27. "Intestinal Obstruction," W. M. McCabe, M.D., Nashville.
To open discussion: J. W. Brandau, M.D., Clarksville.
28. "The Cellular Reaction of the Peritoneum to Infections," J. M. Maury, M.D., Memphis.
To open discussion: J. P. Tillery, M.D., Knoxville.
29. "A Consideration of Some of the Forms of Esophageal Stenosis, with Treatment," Richmond McKinney, M.D., Memphis.
To open discussion: Charles Huff Davis, M.D., Knoxville.
30. "Menstrual Disorders," L. E. Burch, M.D., Nashville.
To open discussion: J. S. Bachman, M.D., Bristol.
31. "The Public Health Situation in Tennessee Portrayed by Mortality Records," H. H. Shoulders, M.D., Nashville.
To open discussion: Jos. H. White, M.D., U. S. P. H. Service.
32. "A Simplified Technique in the Application of Schick's Reaction for Testing Immunity to Diphtheria," Wm. Litterer, M.D., Nashville.
To open discussion: Wm. Krauss, M.D., Memphis.
33. "Tumors of the Female Breast," J. L. McGehee, M.D., Memphis.
To open discussion: R. B. McCown, M.D., Knoxville.
34. "Constipation," B. F. Fyke, M.D., Springfield.
To open discussion: N. S. Walker, M.D., Dyersburg.
35. "The Treatment of Hip Disease," A. G. Nichol, M.D., Nashville.
To open discussion: Willis C. Campbell, M.D., Memphis.
36. "Report of Two Gun-Shot Cases," W. F. Clary, M.D., Memphis.
To open discussion: Jere L. Crook, Jackson.
37. "A Case of Labyrinthine Fistula—Operation—Recovery," M. M. Cullom, M.D., Nashville.
To open discussion: Robert Fagin, M.D., Memphis.

38. "The Interlocking of the Different Branches of Medicine," W. S. Nash, M.D., Knoxville.
To open discussion: John A. Witherspoon, M.D., Nashville.
39. "Three Caesarian Sections on the Same Patient," Battle Malone, M.D., Memphis.
To open discussion: W. K. Vance, M.D., Bristol.
40. "Immobility in the Treatment of Injuries of Fingers and Toes," J. W. Handly, M.D., Nashville.
To open discussion: Duncan Eve, Jr., M.D., Nashville.
41. "Recognition of the Early Symptoms of Dementia Praecox," E. W. Cocke, M.D., Bohvar.
To open discussion: W. G. Somerville, M.D., Memphis.
42. "The Treatment of Inoperable Carcinoma of the Uterus by the Percy Cantery Method," E. T. Newell, M.D., Chattanooga.
To open discussion: R. E. Fort, M.D., Nashville.
43. "Hysteria Due to Alleged Traumatism," S. R. Miller, M.D., Knoxville.
To open discussion: A. W. Harris, M.D., Nashville.
44. "Prevention and Treatment of Shock," Herbert Acuff, M.D., Knoxville.
To open discussion: J. A. Crisler, M.D., Memphis.
45. "Retro-Displacements of the Uterus. Report of Cases with Remarks Concerning Type of Operation to Be Selected Under Certain Conditions, Especially the Barrett and Baldy-Webster Operations" (Lantern Slides), W. T. Black, M.D., Memphis.
To open discussion: M. C. McGannon, M.D., Nashville.
46. "Transplantation of Ovary. Report of a Successful Case," Frank Turney, M.D., Chattanooga.
To open discussion: Herbert Acuff, M.D., Knoxville.
47. "Some Problems in Feeding," J. H. Atlee, M.D., Chattanooga.
To open discussion: G. E. Campbell, M.D., Elizabethton.
48. "Some Fallacies in the Accepted Treatment of Opiumism," H. E. Goetz, M.D., Knoxville.
To open discussion: W. R. Wallace, M.D., Memphis.
49. "Etiology of Tuberculosis," C. A. Robertson, M.D., Ridgeway.
To open discussion: W. C. Officer, M.D., Monterey.
50. "Diagnosis of Extra-Peritoneal Appendicitis," L. W. Haskell, M.D., Memphis.
To open discussion: T. G. Pollard, M.D., Nashville.

SECTION ON OPHTHALMOLOGY, LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY.

Chairman—Giles C. Savage, M.D., Nashville.

Vice-Chairman—Newton C. Steele, M.D., Chattanooga.

Secretary—Octavus Dulaney, M.D., Dyersburg.

Monday, April 3, 10 A. M.

1. "Chairman's address, 'Routine in Eye Work,'" Giles C. Savage, M.D., Nashville.
2. "Dacryocystitis as a Predisposing Cause of Corneal Ulcers," Louis M. Scott, M.D., Jellico.
To open discussion: Charles B. Jones, M.D., Knoxville.
3. "Trachoma," Andrew F. Richards, M.D., Sparta.
To open discussion: Newton C. Steele, M.D., Chattanooga.
4. "Intra-Capsular Cataract Extraction," Chas. H. Davis, M.D., Knoxville.
To open discussion: W. G. Kennon, M.D., Nashville.

Afternoon Session, 2 P. M.

5. "A Report of a Case of Cystic Tumor Arising in an Orbit in Which Transplantation of Fat Had Been Done," W. Likely Simpson, M.D., Memphis.
To open discussion: Hilliard Wood, M.D., Nashville.
6. "Subconjunctival Injections," Emmett L. Jones, M.D., Cumberland, Md.
To open discussion: George H. Price, M.D., Nashville.
7. "A Case of Removal of Tumor on Optic Nerve," J. McChesney Hogshead, M.D., Chattanooga.
To open the discussion: F. Phinzy Calhoun, M.D., Atlanta, Ga., and E. C. Ellett, M.D., Memphis.
8. "Some Fundus Diseases of Interest to the General Practitioner," Jos. Lee Goodwin, M.D., Chattanooga.
To open discussion: Archibald C. Lewis, M.D., Memphis.
9. "Hyalitis; With Report of Cases and Treatment," John Thomas Herron, M.D., Jackson.
To open discussion: Thomas P. Miller, M.D., Knoxville.
10. "Acute Middle Ear Trouble," Walter Dotson, M.D., Lebanon.
To open discussion: G. B. Gillespie, M.D., Covington.

Evening Session, 8 P. M.

11. "The Upper Respiratory Tract From a Surgical Standpoint," Cornelius C. Howard, M.D., Memphis.
To open the discussion: Charles Huff Davis, M.D., Knoxville.
12. "Tonsillectomy—Indications and Technique," Edwin Lee Roberts, M.D., Nashville.
To open discussion: O. Dulaney, M.D., Dyersburg.
13. "Secondary Hemorrhage Following a Tonsil and Adenoid Operation; With Report of Case," W. Scott Farmer, M.D., Cookeville.
To open discussion: George E. Vaughn, M.D., Clarksville.
14. "Subperiosteal Abscess and Necrosis of the Antrum of Highmore; With Report of Case," Alexander B. Dancy, M.D., Jackson.
To open discussion: Emmett L. Jones, M.D., Cumberland, Md.

COMMITTEES.

ARRANGEMENTS—L. L. Sheddan, M.D., Chairman; J. M. Kennedy, M.D.; S. R. Miller, M.D.; Edgar McNabb, M.D.; M. M. Copenhaver, M.D., Knoxville.

ENTERTAINMENT—E. R. Zemp, M.D., Chairman; C. J. Carmichael, M.D.; Chas. Huff Davis, M.D., Knoxville.

SCIENTIFIC WORK—Olin West, M.D., Chairman, Nashville; Battle Malone, M.D., Memphis; E. T. Newell, M.D., Chattanooga.

MEMOIRS—N. F. Raines, M.D., Chairman, Raines; D. J. Roberts, M.D., Nashville; T. H. Marable, M.D., Clarksville; H. A. Gant, M.D., Columbia; Y. L. Abernathy, M.D., Chattanooga; W. J. Matthews, M.D., Johnson City; I. A. McSwain, M.D., Paris; G. E. Campbell, M.D., Elizabethton; H. C. Sanders, M.D., Selmer; J. G. Eblen, M.D., Lenoir City.

TUBERCULOSIS—Larkin Smith, M.D., Chairman, Nashville; Richmond McKinney, M.D., Memphis; H. Lockhart, M.D., Coalbmont.

PUBLIC POLICY AND LEGISLATION—G. H. Price, M.D., Chairman, Nashville; A. B. DeLoach, M.D., Memphis; G. P. Zirkle, M.D., Kingston; W. M. McCabe, M.D., Nashville; W. C. Dixon, M.D., Nashville.

HOUSE OF DELEGATES.

The House of Delegates will meet each day at 8 a. m. and at 2 p. m. for sessions of one hour each. Delegates will please attend promptly so that they may be present at the scientific section as much as possible. If the business of the Association requires, the House of Delegates may prolong its sessions or remain in session after the final adjournment of the general meeting.

General sessions will be held in the main auditorium of the Elks' Home.

The opening session will be called to order at 10 a. m., Tuesday, April 4, by Dr. L. L. Sheddan, Chairman of Committee on Arrangements. The public is invited.

Members will please register at once upon reaching the place of meeting, and receive badges.

Members of the House of Delegates will receive properly marked badges upon presentation of credentials to the Secretary.

Be on time.

COUNCILORS.

First District

C. P. Fox, M.D., 1916, Greeneville.

Second District

S. R. Miller, M.D., 1917, Knoxville.

Third District

A. F. Richards, M.D., 1916, Sparta.

Fourth District.

W. S. Farmer, M.D., 1917, Cookeville.

Fifth District.

F. B. Reagor, M.D., 1916, Shelbyville.

Sixth District

J. F. Gallagher, M.D., 1917, Nashville.

Seventh District

L. E. Wheat, M.D., 1916, Cornersville.

Eighth District

A. B. Dancey, M.D., 1917, Jackson.

Ninth District

T. B. Wingo, M.D., 1916, Martin.

Tenth District

J. L. Andrews, M.D., Memphis.

DELEGATE TO AMERICAN MEDICAL ASSOCIATION.

Perry Bromberg, M.D.
Nashville.
1914-1915.

Alternate

Geo. H. Price, M.D.
Nashville.

Jere L. Crook, M.D.
Jackson.
1915-1916.

Alternate

J. McC. Hogshead, M.D.
Chattanooga.

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Memphis.

THE JOURNAL

OF THE

TENNESSEE STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Tennessee

Office of Publication, 306 First National Bank Bldg., Nashville

APRIL, 1916

EDITORIAL**FROM NASHVILLE TERRITORY TO KNOXVILLE.**

The Nashville, Chattanooga and St. Louis Railway offers comfortable transportation to those of our members who will go to the Knoxville meeting from Nashville and from points north, south and west of Nashville. An all-steel train carrying a special Pullman sleeper for the accommodation of our members will leave Nashville at 9:30 p. m. Monday, April 3. From Chattanooga this special sleeper will go to Knoxville as a part of the Southern's brag train, the "Memphis Special." A regular sleeper leaves Nashville each night at 9:30 over this same route, so that those who do not go from Nashville on the special Pullman will have good service on any night upon which they may go to the meeting. Those who go to Knoxville on this night train over the N., C. & St. L. will arrive in Knoxville at 8:25 the next morning. Breakfast may be had on the dining car between Chattanooga and Knoxville. An announcement of the N., C. & St. L. special will be found in the advertising pages of this Journal.

If any wish to stop over in Chattanooga, they may leave Nashville over the N., C. & St. L. at 8:30 a. m., or on the "Dixie Flyer" at 11:58 a. m. The first of these trains reaches Chattanooga early in the afternoon, while the "Dixie Flyer" arrives at 4:12. The "Memphis Special" leaves Chattanooga for Knoxville at 5:15 a. m., reaching the latter city at 8:25.

Trains over the Tennessee Central leave Nashville for Knoxville at 9:15 a. m. and 10 p. m.

AN IMPOSTOR AT WORK IN TENNESSEE

A smooth gentleman representing himself as

the agent of "The Ohio Service Co.," has been gathering in easy shekels from thrifty doctors in Middle Tennessee. The wails of these doctors are exceeded in intensity only by the glee of the gentleman who found the process of separating them from their coin so very, very easy.

Mr. "John Mack"—any other name would do as well where the money of doctors is gone after—tells a glowing tale of what the "Ohio Service Co." is going to do in the kindness of its great heart toward selling the dear doctor tires and things for their Fords and things—if the dear doctor will just give Mr. "John Mack" one of his nice little ten dollar bills. If there is any one thing dear doctor wants to do more than another, it is to get something for nothing. Every body in this wide world but dear doctor knows that this can't be did. So Mr. "John Mack" has enough Tennessee money to buy himself a Ford and tires to go on it at market prices, while dear doctor has to put in another blow out patch and wait until he can recover from the effects of his contribution to Mr. "John Mack" so he can get a new tire for just what others have to pay.

Several Middle Tennessee doctors have written us to ask that we notify our readers that Mr. "John Mack" is abroad in the land and that the U. S. Postoffice department has been unable to locate the place of business of the "Ohio Service Co." This we gladly do, hoping, at the same time, that Mr. "John Mack" will enjoy to the fullest the benefits of his easy money so graciously presented to him by a number of our friends who so convincingly have proven the truth of the old, old saying—"a sucker is born every minute."

Beware Mr. "John Mack," of the "Ohio Service Co"!

Moral: If you get honest goods, you must pay for them. Also: Patronize our advertisers.

TO COUNTY SECRETARIES.

You will confer a very great kindness upon the Chairman of the Committee on Memoirs, Dr. N. F. Raines, Raines, Tennessee, if you will give him the names of members of your societies who died in 1915 and such information

about them as will help him to compile his report for the Knoxville meeting.

DROPPED FROM THE MAILING LIST.

If you fail to receive this Journal next month it means that your name has been dropped from the mailing list, from the membership roll of the Tennessee State Medical and the roll of the American Medical association. Why? Oh, just because you have not paid your little two dollars dues, or if you have your name has not been reported to this office. We don't want to lose you from the association. Please pay up!

DR. W. L. RODMAN.

After an illness of two days, Doctor W. L. Rodman, President of the American Medical Association, died at his home in Philadelphia on March 8th. Pneumonia was the cause of death.

Doctor W. L. Rodman was a Kentuckian by birth but had made his home in Philadelphia for a number of years. In his native state he established himself as a surgeon of unusual ability and his career in Pennsylvania was so crowded with successes that he came to be known throughout the nation as a leader in his profession. As a tribute to his ability and popularity he was chosen by his fellows to be President of the American Medical Association. In this capacity he served with distinction, having devoted himself untiringly to the advancement of the interests of the great organization.

Organized medicine in America has suffered great losses by the deaths of Rodman and Favill, two men who have done more than their fair share of work for the extension of its influence and for the upholding of its ideals.

AT LAST !

The "Indian doctor" has had to quit. All his money paid to lawyers who rushed to his aid as long as his money lasted and all his hoodooism and juggling could not save him. The Court of Civil Appeals declared the famous negro yarbist in contempt of court and sentenced him to pay a fine and to serve a jail sentence. The court also decided that he

was guilty of practicing medicine without license.

This imposter has made a record and, in making it, has put a stain on the record of one of the best counties in Tennessee. It is remarkable indeed that it took so long for the decent people of this good county to wake up to what it meant for them to be advertised as willing to harbor and protect such a viper. It is more remarkable that lawyers could be found in any county in Tennessee who would go to the lengths that this negro's attorneys went to help him break the plain law of the state and to help him rob his victims. The young lawyer who successfully prosecuted this creature has worked against disheartening circumstance. The one or two Roane County newspapers who dared to demand the prosecution of the negro were threatened with the ugliest of threats. Those of our members who kept up the fight against the "Indian" fought at a sacrifice. But at last decency has won.

THE 1915 PRACTICE ACT.

Tennessee is the only state in the union in which all who seek to treat disease (excepting Christian Science healers) must apply for license on an equal footing. Under the provisions of the law enacted in 1915 all who seek license from the state to practice medicine in any manner must convince a board of preliminary examiners that they have had proper educational training before they can go before the Board of Medical Examiners. The latter body will not examine applicants until they have been before the preliminary board and had their credentials properly endorsed.

There has been only one group of physicians licensed in Tennessee since this law was passed. The time for the annual examinations is drawing near and the second class will appear before the legally appointed boards. It is to be hoped that all whose purpose it is to apply for license to practice the healing art in this state will acquaint themselves with the provisions of the law. By so doing they will save themselves trouble and will also make the tasks of the examining boards much easier.

The whole world of medical education and all whose duty it is to administer laws con-

trolling licensure in the various states are watching Tennessee. For all these many years, laws of divers kinds have been enacted with the view of protecting the people against untrained men who would practice medicine as exponents of the various schools or sects. All of these laws have made exemptions and exceptions in favor of one or another of these schools. The 1915 Tennessee law is the only one which has been built on the platform of educational preparedness for all applicants for license, and the men who have given most study to the subject believe that the Tennessee law more nearly approaches the ideal than any other heretofore enacted. It simply demands that osteopaths, regulars, and all others who are to qualify as legal practitioners shall first prepare themselves to be able to undertake an intelligent study of the human body and its needs in health and disease, that they shall then make this study in schools equipped for thorough scientific teaching, and that they shall present documentary proof of the completion of the course of study in such schools before they can legally ask for examination for license.

There must be no backward step in Tennessee in the matter of control of medical licensure. The 1915 law must be retained and strengthened as occasion demands. It is the only law which offers anything worth while for real public protection from untrained men, and if properly administered it will go far toward keeping out a number of unneeded practitioners of all schools. It will also make it possible for Tennessee to extend the field in which reciprocity may be secured.

Stand squarely up for the 1915 law. It's good for the public, it's good for our schools, it's good for the doctor who believes that high standards based upon educational qualification should be maintained.

JUDGE HIGGINS' OPINION.

The opinion handed down by Judge Higgins of the Court of Civil Appeals in the case of the Roane County faker, Anderson, is printed in full in this Journal. We commend it to our readers as the work of a big mind and a big heart, and hope that our every reader will take time to read it carefully. It

is an opinion that should be read by the public and if the funds of the Journal were adequate for the purpose, reprints would be made and sent broadcast over Tennessee.

There's something in this opinion which will stir the heart of every honest doctor who is trying to do his duty to mankind. There's something in it for the doctor who does not realize what his full duty is. There's something in it which should give pause to the doctor who knows his duty but does it not.

There's something in this opinion which can but encourage and strengthen the honest lawyer who is striving to do his duty to the state. There's something in it which we commend to the dollar grabber of the legal profession as worthy of his careful consideration if his conscience is not eternally dead.

There's protection in this opinion for the weak and ignorant. There's a warning in it for the infernal scoundrel who would make the ill and woes of invalids and helpless the source of fatness and comfort for himself by preying upon them.

Thank God, we say, for Higgins, J., and others of his kind in our courts!

ANOTHER NEW SOCIETY.

The Wayne County Medical Society was organized on March 9, 1916, with five charter members. Dr. Ed. Culp, Secretary, advises us that additional members will be reported a little later.

Slowly but surely the members of the medical profession in hitherto unorganized counties are coming to see the need for banding themselves together and joining in the activities of state and national societies. Wayne is the third new county for 1916, Coffee and Hawkins having organized last month. Hardin, Decatur and Lawrence have signified their intention of perfecting organization at once.

The Journal desires to assure the members of the Wayne County Medical Society that the Tennessee State Medical Association is glad to have them in the organization and that whatever the association has is theirs to enjoy and welcome. We hope Wayne will have a delegate on hand at Knoxville and that all the members will attend the annual meeting.

News Notes and Comment

Dr. Eugene Orr, Nashville, has returned from a visit to Chicago and Rochester clinics.

Dr. T. B. McKinney, Nashville, visited the Chicago and Rochester clinics in the early weeks of March.

Dr. J. M. Oliver, recently resigned the superintendency of the Davidson County Tuberculosis Hospital, will enter private practice.

Dr. G. Frank Aycock has been elected Superintendent of the Tuberculosis Hospital of Davidson County to succeed Dr. J. M. Oliver, resigned. Dr. Aycock is splendidly equipped for the place and his selection by the Commissioners of the Hospital will be applauded by the medical profession of the county.

Dr. G. E. Pettet, one of the Trustees of the Journal and for several years a working member of the Tennessee State Medical Association, has written the Journal to the effect that he has bought himself a stock farm near Lexington, Mississippi, and that he will hereafter make his home there. Dr. Pettet has sold his interest in the Pettet and Wallace Sanitorium at Memphis.

Correspondence

The following replies to the Journal's inquiry as to the use of morphin-hyoscin in labor, have been received to date. Is morphin-hyoscin not much used in obstetrical practice by Tennessee doctors? Or do those who use it object to giving us the benefit of their experience?

In February Journal, page 457, you ask for replies to your questions concerning the above.

Question 1. Do you use morphin-hyoscin in your obstetrical work? Yes. Since I do, question 2 and 3 do not apply to me.

4. In how many cases have you used it? Have not kept the number, but nearly all I have attended for seven or eight years.

5. Do you use it in every case? No, for some need no analgesic.

6. At what stage of labor do you give the initial dose? Have no fast rule. Depend on the condition of the patient, and the intensity of the suffering.

7. How often do you repeat it? As often as deemed necessary.

8. What determines the time of administration of each dose? Don't know that I understand your meaning. Would say, the effect of the preceding dose, and the present needs and condition of the patient.

9. Do you find it necessary to use chloroform in cases in which morphin-hyoscin has been given? I very often give chloroform during the expulsive stage.

10. Do you use morphine-hyoscin in labor cases in private homes or only in hospital cases? Private homes only. Have no hospital work.

11. Have you noticed any marked nervous manifestations after its administration? Yes, but not that I considered dangerous. The longer I use it, the fewer disagreeable effects.

12. Have you noted any ill effects produced on the child from morphin-hyoscin? I think a larger percentage are slow to begin breathing, and need to be watched to see that they keep it up.

13. On the mother? None to speak of.

14. Have you had an increased or decreased infant mortality since you began the use of morphin-hyoscin? Have noted no difference. Am sure it has caused no deaths.

15. Have you had post partum hemorrhage or other complications more often where morphin-hyoscin was used than in cases where not used? I think the tendency to post partum hemorrhage is increased.

16. Do you find it necessary to use forceps as often when morphin-hyoscin has been given as when not? Have noted no difference.

17. Why do you use morphin-hyoscin in obstetrics? Because most cases need something to make the pain easier to bear and this is the most satisfactory analgesic I have ever found.

18. Is to be answered by the other fellow.

Your questions say "morphin-hyoscin." I have always used the morphin-hyoscin-cactin

combination. Whether the latter adds any to the virtue of it, I don't know. I am sure I have seen cactus preparations do hearts good. In this combination it can do no harm. I think I have learned that some cases will be faster when morphin-hyoscin is used, but most of them will be somewhat delayed.

I almost always give a fortieth of a grain of strychnine by mouth, at the time I administer the first dose of the morphin-hyoscin hypodermically. At the completion of the second stage or before, a dose of pituitrin. Sometimes ergot also, but not so often as before we had pituitrin.

An obstetric case is strictly an all time job, no place for fooling. If this is borne in mind by the attendant, and he strictly attends to his job, the obstetrical patient should be able to get the benefit of this, which seems to me wonderful, means of relief, with but little if any danger to either mother or child, and what danger there may be, many times outweighed by the good to be derived.

H. C. SANDERS, M. D.

Selmer, Tennessee.

In re "Morphine-Hyoscin Analgesia in Obstetrics in Tennessee:" Answering question 1. No. Question 2. No. Question 19. I find chloroform perfectly satisfactory; have been using it for thirty-four years.

Yours truly,
SIDNEY THOMPSON.

Humboldt.

The Journal of the Tennessee State Medical Association, Nashville, Tenn.

1. Yes.
2. Yes.
3. I still use it.
4. About 12.
5. No.

7. When the pain becomes severe without regard to stage of labor. If labor is easy, I don't give it.

8. Only often enough to make pains bearable and never often enough to decrease strength or frequency of contraction to a marked degree.

9. The pain and strength and frequency of the uterine contraction.

10. I always use chloroform or ether toward the end of the second stage and often throughout the second stage.

11. Private homes. Have no hospital facilities.

12. No.

13. Perhaps more nervous and certainly less vigorous at birth.

14. Nervous. The patients to whom I have given morphin-hyoscin were as a rule patients who were nervous and could not bear pain well.

15. Never had a death in my cases. As before stated, I try to avoid delaying labor, even if I must quit the "dope."

16. Always have more hemorrhage and more reaction, slight fever second day as a rule. Never had severe hemorrhage or septic condition following.

17. Very often resort to forceps or pituitrin which I find necessary in almost every case.

18. To render labor less painful. I don't use it to the extent advised in any of the routines as I consider it unsafe in a private home.

19. Most of my cases don't care to take it after I have explained the dangers and disadvantages as I see them.

R. C. KIMBROUGH.

Madisonville, Tenn.

Editor the Journal:

On page 457 of the February issue you ask the question, is morphin-hyoscin analgesia used in Tennessee? I beg to reply to the detail questions as follows:

1. "Do you use morphin-hyoscin in obstetric work?"

Yes.

2. "Have you ever used morphin-hyoscin?"

Yes.

4. "How many cases?"

One hundred and thirty-two.

5. "Do you use it in every case?"

Practically.

7. "At what stage of labor do you give the initial dose?"

When the pains become severe, regardless of the stage of labor—but usually near the completion of the first.

8. "How often do you repeat it?"

I have never given more than three injections.

9. "What determines the time of administration of each dose?"

The severity of the contractions, and the complaint of the mother, regardless of the memory test.

10. "Do you find it necessary to use chloroform?"

Not always necessary, but usually give it for a few minutes just at the completion of the second stage.

11. "Do you use it in the home, or only in hospital?"

In the home.

12. "Have you noticed any marked nervous manifestations?"

I have not; but some patients are more susceptible to the remedies than others.

13. "Have you noticed any ill-effects on the child?"

No.

14. "On the mother?"

No. (I would add that I do not use the large doses recommended by some obstetricians abroad; but usually half the quantity; viz., Morphin, 1-8 to 1-6; hyosein, 1/200, and never more than three doses).

15. "Have you had increased or decreased infant mortality?"

No; certainly not increased.

16. "Have you had post-partum hemorrhage or other complications due to its use?"

No.

17. "Do you find it necessary to use forceps as often when morphin-hyosein has been given as when not?"

My records are not complete on this point; but I think not so often.

18. "Why do you use morphin-hyosein in obstetrics?"

For the comfort of the mother, and I may add, also, for the *safety*, as I believe eclampsia has sometimes been averted by its use.

J. W. BRANDAU.

Clarksville, Tenn.

Editor the Journal:

I am not writing for publication. I desire to express to you my appreciation of your effort to give us a Journal "worth the money."

But I think you ought to have money enough to bring our own State Journal up to a higher plane. Our State Association dues should be \$5.00 a year to every member, and you could then give us a Journal that would make some fellows sit up and take notice, with the increased amount in advertising.

In regard to medical defense—this charge should be \$5.00 also. If it is worth anything at all it is worth \$5.00, and I surely fear as to whether it will ever be worth much at present rate of \$1.00. The men that pay the \$1.00 would just as easily pay \$5.00, and with the small number paying at all I don't see what it can be worth. Charge enough to make the investment worth something to the brother, if one needs the help, or drop it out.

A man cannot attend to this fund just for the honor and he should be paid; but if it takes it all to run the mill let us shut down the gate. I do not expect to be at Knoxville, but I trust someone can see as I do and let us step up a notch.

With kindred personal regards, I am,

Yours very truly,

JAMES A. LARUE.

Society Proceedings

DAVIDSON COUNTY.

January 25, 1916. The meeting was called to order at 8 p. m. by the President, Dr. Tigert. The minutes of the previous meeting were read and approved. The Auditing Committee made its report. Dr. Bromberg moved, and Dr. Kennon seconded, that the report be accepted: carried. The application of Dr. Leon Lanier for membership was presented.

The essay of the evening was read by Dr. Herman Spitz, his subject being "Autogenous Vaccines in the Treatment of the Upper Respiratory Tract." Discussion was lead by Drs. A. A. Eggstein and T. B. Givan.

Dr. Eggstein: Thinks theory of vaccine treatment should be taken with reserve. The tendency at this time is toward ferment action. Vaccines probably are beneficial, according to theory of ferment action, from the protein present in the bacterial bodies. Specificity of action cannot be adhered to, as was formerly

thought. He thinks vaccines find their chief field of usefulness in immunization.

Dr. Givan: Accepting the antibody theory, it would seem that autogenous vaccines are of more value than stock vaccines. In all cases a proper bacteriological diagnosis is essential.

Dr. Litterer: Vaccine therapy in his hands has proved a disappointment. The best results have been attained from the use of vaccines in the treatment of furunculosis. He does not believe specificity is clear cut. Preparation of vaccines by the use of one medium should be condemned.

Dr. Morrison: Referred to the disappointing results of vaccines among members of the dental profession.

Dr. Robertson: Vaccines have proved generally disappointing as therapeutic agents in his hands in the treatment of tuberculosis.

Dr. Spitz (closing): Referring to specificity, he states it has been clearly established that bacteria do produce something which can be isolated. He believes if we could use vaccines from living organisms, better results would be obtained.

Case Reports.

Dr. Larkin Smith: A man of 56 years; eight years ago he contracted syphilis; there is no history of any other form of infection. He now has aortic insufficiency; the lesion is fairly well compensated, and the heart is not yet very much enlarged, the apex being behind the sixth rib in the nipple line. When auscultating his heart and palpating his radial pulse, it was noticed that beats were dropped at infrequent and irregular intervals. At first this was attributed to the occurrence of premature contractions or extra systoles, until a tracing of the radial pulse was taken, and it was seen that when the intermissions came in the beats, there was no evidence of a premature beat. A polygraphic tracing was then taken of the radial and jugular pulses, which showed that whenever the radial pulse missed a beat, the corresponding jugular pulsation lacked its carotid wave, though still showing its auricular wave, demonstrating a failure of conduction of impulse from the auricle through the auriculo-ventricular node and bundle of His to the ventricle, thus inhibiting ventricular contraction, constituting a partial heart-block.

Dr. Witt expresses doubt as to whether there

is justification for assuming the patient has myocardial disease at this time.

Replying Dr. Smith stated that if the bundle of His alone were involved the patient might live a long time, but anatomical reports show that nearly all cases have more involvement than the bundle of His.

Dr. Edwards: Patient, age 27, inmate of the State Prison; negative family history. Had syphilis two years ago, for which he has taken treatment constantly. Had several rheumatic attacks six years ago. Lost ten or twelve pounds in weight during past three months. Patient began complaining of slight pain in lower right portion of abdomen three months ago; never had any severe attacks of colic; more pain at night. Has had indigestion four or five years, complaining frequently of heartburn; sour stomach after eating and a great deal of sour belching. Sometimes constipated; no diarrhea. Complains of slight dyspnoea. No urinary symptoms. Physical examination practically negative, except for a small mass in region of appendix, which seemed to be movable; slight tenderness on deep palpation in this area. Leucocyte count 11,000; urine negative.

At operation a tumor the size of an English walnut was found attached to the mesoappendix, with two large leaflets of fat and fibrous tissue on either side, making a mass about the size of a fist; appendix apparently normal; no intestinal involvement; no glandular enlargement. Pathologist reported lymphosarcoma.

On motion an adjournment was taken at 9:35 p. m.

The following members were present: Drs. Jones, McCabe, Shoulders, Smith, McKinney, Eggstein, Simons, Ezell, Friedman, Denham, Manier, W. T. Briggs, Pickens, Jack Witherpoon, Witt, Handly, Dabney, Robt. Sullivan, Orr, Kennon, Etter, Maxwell, Bishop, R. A. Barr, Morrison, Cochran, Harris, King, Hill, Morrissey, T. A. Leonard, Robertson, Nichol, Fuqua, Bromberg, Givan, Spitz, Brush, Thach, Collins, O. N. Bryan, Gallagher, W. B. Anderson, R. R. Caldwell, Pollard, Billington, C. F. Anderson, Dunklin, Magan, Teachout, C. C. Sullivan, Bloomstein, E. M. Sanders, Floyd, L. W. Edwards, Litterer, Cowden, Cayce, Watkins, Schell, J. A. Sanders, Tigert, and Aycock. Total, 63.

The following is the conclusion of the meeting of January 18, a part of which appeared in a previous number of the Journal.

Dr. Witt: The number of presenting symptoms of tabes are many, and the majority of these are ocular, urinary or rheumatic. A general knowledge of medicine is necessary in arriving at a diagnosis.

Dr. Cullom: It is highly important for the oculist to understand the general symptoms of tabes, on account of the fact that optic atrophy is frequently the first symptom—sometimes as high as twenty years preceding the other manifestations. Tabes causes the majority of cases of optic atrophy. The speaker brought up the question as to whether a special strain of the spirochete causes tabes.

Dr. Harris: Referred to Maloney's work, in which he brought out the fact that a tabetic with loss of muscular sense has not all fibres destroyed, and when blindness occurs, these fibres are called into action to guide the patient in locomotion. Traumatic tabes is explained on the reasoning that tabes exists before the trauma is received, and is "bring out," as a result of the trauma. As to a specific strain of spirochete causing tabes nothing is known, but there are well authenticated cases where persons receiving their infection from the same source have developed tabes. The Argyll-Robertson pupil is simply one that does not react to light. It is syphilitic, but not necessarily tabetic.

Dr. Price: The symptoms, while characteristic, have variations. The structures involved in the Argyll-Robertson pupil are under control of the third nerve. This phenomenon means that the condition is located in the cervical region of the spinal cord. We find many variations in the size and reaction of the pupil, depending on the degree of third nerve and sympathetic involvement. Involvement of the sixth nerve, as evidenced by paralysis of the external rectus muscle is to be noted.

Dr. Wood: Referred to high percentage of cases of optic atrophy due to tabes, as given by authorities. Many cases of optic atrophy are otherwise well, but suspicion should be attached to all cases in general.

Dr. Price: Optic atrophy is due to degeneration and not inflammation, and when the

nerve head is obscured by cloudiness, etc., inflammation, not optic atrophy, is present.

Dr. Kennon (closing): The optic neuritis found in tabes is usually syphilitic, per se, and not a part of tabetic atrophy. The appearance of the nerve head has no relation to the general condition of the patient. Most of the authorities state that, as a rule, only one of the extraocular muscles is involved at a time. When more than one, the process is usually due directly to syphilis. Inequality of the pupils means the existence of cerebral syphilis, whether tabes, paresis or syphilitic pachymeningitis. The speaker does not think the Argyll-Robertson pupil is pathognomonic.

Case Reports.

Dr. Harlin Tucker: Man, fifty-four years of age, called at the office December 21 for prescription for lagrippe. Was called to see patient the next morning, when he was complaining of aching all over and had a cough, for which prescriptions were given. Heart was negative. Lungs presented a few moist rales in upper and anterior portion. Patient's wife called attention to a skinned place on left shin, about the size of a half-dollar. Patient said the outer side of the calf was a little tender, and on examination, an indurated mass was found here. The scab was removed from the skinned place on the shin, iodine was applied and patient kept in bed. On December 24, patient was seen, cough was better, and general condition better. Mass on outer side of calf more tender, skinned area on shin slightly better, and swelling very marked in left ankle. Urine analysis negative. Patient was kept in bed with hot water bottle applied to limb and foot elevated. Patient was removed to hospital December 27, when rest in bed and heat was continued. On January 1, incision was made in mass on outer side of the calf, which by this time was presenting all the signs of pus formation. About one ounce of pus was evacuated and drain placed in wound. About this time patient began to complain of pain just above the external malleolus, and an incision was made here about January 6, about two drams of pus evacuated, and gauze wick inserted. Patient improved rapidly, temperature going down, appetite good, and general condition good. Both abscesses were clearing up rapidly and swell-

ing in ankle had subsided. The lesions were dressed each day. On January 11, the original skinned area on the shin was entirely healed, and the sites of both abscesses were healing so rapidly, I told the patient he might sit up in a chair, but he preferred to wait till the next day. At 1 p. m. I was called at my residence, two blocks away, when I arrived, the patient was cyanotic and gasping for breath; heart slightly irregular. The attack came on just as patient was sitting up in bed to use the bed pan. The patient's condition continued to grow worse, and he died in about fifteen minutes after the beginning of the attack. No autopsy was made. Diagnosis: Pulmonary embolism.

Dr. Wood: Young man, sixteen years of age, received injury on neck about November 1, 1915. Patient suffered from inconvenience till about two weeks after the injury, when he began to experience difficulty in breathing. This condition grew worse and he came to Nashville November 30, when, on examination, a diagnosis of laryngeal stenosis was made. A tracheotomy was done December 1, and O'Dwyer intubation tube introduced, but it was found impossible for one of these to be retained. After much difficulty, some larger tubes were made to order, and on December 20, tube No. 9 of this set was introduced and retained by the aid of ligatures through the tracheotomy wound and mouth. On December 28, put in laryngeal tube No. 10, and left out the tracheal tube. On December 29, patient had a chill and two or three degrees of temperature. On January 3, tried laryngeal tube No. 12 and failed. On January 18, put in tube No. 11. The patient has steadily improved as to ability to breathe, the tube having been left out for a week, preceding the introduction of tube No. 11, on January 18. He is not able to speak above a whisper, but feels well and wants to go home.

Dr. Witt asked the speaker regarding the prognosis as to regaining voice. Replying Dr. Wood stated that he could find no statistics on this point, but that he did not expect the patient to regain his voice. He stated that the seventy like cases recorded in the literature, showed an ultimate mortality of 70 per cent.

Dr. Ezell in discussing the case, said he had seen the patient with Dr. Wood, and referred

to the teachings of some Vienna men to the effect that intubation in itself produces stenosis.

Dr. Bloomstein said he had received the same impression of the attitude of the Vienna men as Dr. Ezell, but stated that out of about fifty cases he had intubated for laryngeal diphtheria no stenosis had followed. Drs. Savage, J. A. Witherspoon and Cullom rose to congratulate Dr. Wood on his excellent results.

Dr. Witt suggested that the Secretary be instructed to request the members of the Academy to report their results from intubation.

Dr. Harris: Has done few intubations and seen no bad results. He has seen one case where the tube had to be reinserted four times on account of stenosis supposed to be due to ulceration of cords, but no permanent bad results followed.

Dr. Cowden: Thinks likelihood of getting necrosis and renewal of stricture as a result of leaving tube in. Thinks thorough dilatation from time to time would best accomplish the desired end.

Dr. Price: Thinks Dr. Wood has done the thing most needed in this emergency. He referred to a case of his own on which tracheotomy was done and tube inserted, which gave considerable relief, but the patient would not permit the treatment to go further. He does not think intubation will cause stenosis.

Dr. Kennon: Sees no more reason for getting stricture from intubation than from a permanent catheter in the urethra.

Dr. Hill: Referred to case in his experience, which he did not see till four weeks after injury and death ensued before tracheotomy could be done. He has done fifteen or twenty intubations without bad results.

Dr. Burch: Congratulates Dr. Wood and says it is a well-known principle that continuous pressure around a stricture will cause its absorption.

Dr. Wood, in conclusion: It seems from the literature that the best results in such cases follow gradual dilatation.

Dr. E. L. Roberts: Girl, 13 years old, in good health, not especially strong, with internal strabismus since early childhood. Ten or eleven days ago she sustained a hard fall, the details of which she cannot give exactly, but thinks she fell over a coal scuttle and struck

her head against the wall. No bruised area was present nor any other external evidence of the injury. Two or three days later, a pronounced facial paralysis of the right side developed. No other paralysis present. Muscles of eyelid are involved—cannot close the eyelids. Taste for the anterior two-thirds of the tongue entirely lost; no diminution in the flow of saliva. No trouble in the ear-drum, head normal. Patient now complains of nothing except a feeling of weakness and is slightly dizzy.

On motion an adjournment was taken at 10:05 p. m.

The following members were present: Drs. McCabe, Jones, Hibbett, Shoulders, Glasgow, Denham, Tharp, Jack Witherspoon, W. B. Anderson, Pickens, O. N. Bryan, Howard King, Savage, T. A. Leonard, Morrissey, Hill, Ezell, Floyd, Price, E. L. Roberts, Wood, Collins, Fuqua, Harris, Harlin Tucker, Witt, C. C. Sullivan, Manier, Kennon, Bloomstein, Simons, J. A. Witherspoon, Cowden, Givan, Cullom, McKinney, Pollard, Bishop, Dabney, Litterer, C. F. Anderson, Gallagher, R. A. Barr, Brown, Smith, Lassiter, N. C. Leonard, Tigert, Aycock, Duncan Eve, Jr., and West. Total, 51.

HARDEMAN COUNTY.

The Journal is especially glad to have a report of the annual meeting of the Hardeman County Medical Society, held on March 7. Dr. R. W. Tate, Bolivar, was elected President; Dr. G. B. Curry, Toone, Vice President; Dr. E. W. Cocks, Bolivar, Secretary and Delegate.

The medical staff of the Western Hospital for the insane extended an invitation to the society to hold its monthly meetings at the hospital and this invitation was accepted. Dr. L. E. Ragsdale, Nashville, was a visitor at the meeting.

Thirteen members were reported by Dr. Cocks for 1916.

Book Reviews

SEXUAL IMPOTENCE. Vecki. Fifth Edition. W. B. Saunders & Co. \$2.25 net.

Those who are familiar with previous editions of Dr. Victor G. Vecki's admirable volume entitled

"Sexual Impotence" will be delighted to learn that it has been revised and brought up to date in a fifth edition.

Those not familiar with Dr. Vecki's work would do well to add Sexual Impotence to their libraries. They will find it both interesting and instructive. Dr. Vecki is Consulting Genito-Urinary Surgeon to the Mount Zion Hospital, San Francisco.

L. A. S.

PAINLESS CHILD BIRTH, EUTOCIA AND NITROUS OXID-OXYGEN ANALGESIA. By Carl Hery Davis, M.D., Associate in Obstetrics, Rush Medical College, Chicago. Forbes & Company, Chicago, 1916. \$1.00 net.

This little volume seems to be a plea for the use of nitrous oxid-oxygen, for better hospital facilities for obstetric cases, and for better obstetrical methods. Beyond these things the author seems to have it in mind to discourage the use of morphin-hyoscin in labor. It is easy to find one's self in entire agreement with the author in most of his contentions, though it is not easy to believe that nitrous oxid-oxygen analgesia will soon come into general use nor that any very great increase in hospital deliveries will soon be realized outside the larger cities.

REPORT ON THE MEDICO-MILITARY ASPECTS OF THE EUROPEAN WAR. By Surgeon A. M. Fauntleroy, U. S. Navy. Bureau of Medicine and Surgery, Navy Department, Washington.

This is a volume which entrances, horrifies, and rejoices the reader. One is entranced in the delightful manner in which Surgeon Fauntleroy presents his most interesting observations in the field with the allied armies in France; one is horrified when it is realized that supposedly civilized creatures can be guilty of the inhuman practices in use by the contending armies; one is rejoiced over the fact that scientific medicine and surgery has won such signal victories in contending with the devilish and outrageous forces which are used for maiming, sickening and destroying human beings. We take it that this Report was prepared primarily for the benefit of the navy surgeons, but there are many practical lessons in it for all surgeons and for all physicians. The illustrations are well chosen, well executed and include a wide range—dressings, splints and appliances, radiographs of bone injuries, hospital and ambulance details, wounds and effects of infection, etc. The deaths of soldiers under shell fire with no external injuries are explained, gas-bacillus infection and gangrene discussed, army sanitation, transportation of the injured, hospital detail, operative procedures and much else of practical interest presented in a very forceful manner. War surgery, as is well shown by Surgeon Fauntleroy, will have, after the great European struggle is over, many valuable contributions to make for the benefit of those who minister to the wounds and injuries of men engaged in the pursuits of peace.

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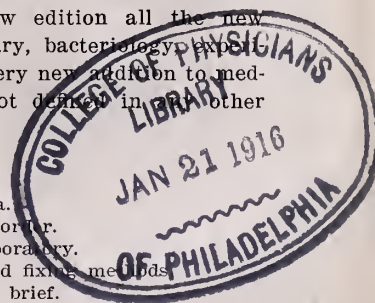
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In tubes of 15 mg. (1-4 grain) hypodermic tablets. In tubes of 30 mg. (1-2 grain) compressed tablets for oral administration.

* New York Medical Journal, July 4, 1914.

† New Orleans Medical and Surgical Journal, August, 1914; Dental Cosmos, December, 1914.

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